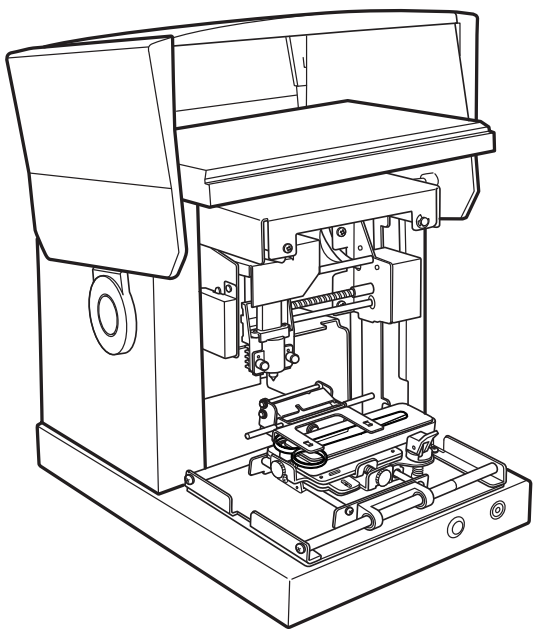
Roland

METAZA
MPX-90M
USER'S MANUAL



- To ensure safe usage and full performance of this product, please be sure to read through this manual completely.
- To ensure immediate access whenever needed, store this manual in a safe location.
- Unauthorized copying, quotation, or translation of this manual, in whole or in part, without the written approval of Roland DG Corp., is prohibited.
- The contents of this document and the specifications of this product are subject to change without notice.
- Roland DG Corp. assumes no responsibility for any loss or damage relating to this product, regardless of any defect in this product or this manual. Such loss or damage, whether direct or indirect, includes, but is not limited to, that arising from the specifications or performance of this product, that due to failure of the product to perform, and that arising from any article made using this product.

Roland DG Corporation

For USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

NOTE:
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.

Use only I/O cables that have been designed and manufactured specifically for this device.

For Canada

CLASS A NOTICE
This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

CLASSE A AVIS
Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

For California

WARNING

This product contains chemicals known to cause cancer, birth defects and other reproductive harm.

For EU Countries

WARNING

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

For EU Countries

CE

Manufacturer:
ROLAND DG CORPORATION
1-6-4 Shinmiyakoda, Kita-ku, Hamamatsu-shi, Shizuoka-ken, 431-2103 JAPAN

The authorized representative in the EU:
Roland DG Corporation, German Office Halskestrasse 7, 47877 Willich, Germany

This system (including the housing and safety device) is a Class 1 laser product.

Complies with IEC 60825-1 Edition 2.0 (2007-03).
Complies with FDA performance standards for laser products except for deviations pursuant to Laser notice No.50 dated June 24, 2007.

Caution - Use of controls or adjustments or performance of procedures other than those specified herein may result in radiation exposure.

[Laser Specifications of This System] (Including Main Frame)
Max. output: 46.5 µW, Pulse duration: 3.0 µs, Wavelength: 655 nm

Roland DG Corp. has licensed the MMP technology from the TPL Group.

Contents

Contents 1

⚠ **To Ensure Safe Use** **3**

Important Notes on Handling and Use **8**

About Operation Manuals **9**

Documentation Included with the Machine 9

Chapter 1 Getting Started **11**

1-1 About the Machine 12
Features 12
Names of Components 12
Checking the Included Items 14
1-2 Installation 15
Installation Environment 15
Removing and storing the retainers 15
Power Cord Connection 16
1-3 Installing the Software 17
System Requirements 17
The Software You Can Install and Set Up 17
Installing the Driver and the Software 18

Chapter 2 Printing **25**

2-1 Preparing for Printing 26
Getting Started: Checking Print Workflow 26
STEP 1: Switching On the Power 27
STEP 2: Specifying Output Destination for METAZAStudio 28
STEP 3: Preparing Instrument to be Imprinted 28
STEP 4: Preparing Print Data 30
2-2 Starting Printing 35
STEP 1: Loading the Instrument to be Imprinted 35
STEP 2: Making Prints 43
STEP 3: Finishing Printing (Switching Off the Power) 45
2-3 Finishing and Stopping Printing Operations 46
Stopping Printing Operations 46
Deleting Data from Print Queue 46

Chapter 3 Maintenance and Adjustment **47**

3-1 Maintenance and Adjustment 48
Points to Note on Daily Care 48
Cleaning the Body/Vise/Table 48
Cleaning the Adhesive Sheet 48
Cleaning of the Head Cap 48
3-2 Adjustment 49
Adjusting the Striking Force of the Pin 49
Adjustment of Origin Point 50

3-3 The Replacement of the Consumable Parts 51
The Replacement Cycle for the Head Cap 51
Head Replacement 52

Chapter 4 Appendix 55

4-1 More Advanced Operations 56
Directly Creating 2D Symbol 56
Registering a Composition and Adjusting the Striking Force 59
Changing Basic Settings of METAZA Driver 60
Creating and Editing Line Text 61
Other operations available with METAZAStuido 65
4-2 What to Do If 66
The [Power/Movement] button is blinking. 66
The machine doesn't run even when printing data is sent. 67
The printed location isn't where desired 67
You cannot select the material of the object to be imprinted using METAZAStudio. 68
The printed image is unattractive. 69
The image is uneven. 69
The image is always faint at the same location. 70
To install METAZA driver separately 72
To Install Software Separately 76
The METAZA Driver Cannot Be Installed 77
Uninstalling the METAZA driver 78
4-3 When Moving the Machine 80
Attaching retainers 80
4-4 Main Unit Specifications 82
Printable Area 82
Location of Power Rating and Serial Number Label 83
Specifications 84
System Requirements for USB Connection 84

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⚠ To Ensure Safe Use

Improper handling or operation of this machine may result in injury or damage to property. Points which must be observed to prevent such injury or damage are described as follows.

About ⚠ WARNING and ⚠ CAUTION Notices

⚠WARNING	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
⚠CAUTION	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

About the Symbols

	The △ symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the triangle. The symbol at left means "danger of electrocution."
	The ⃠ symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. The symbol at left means the unit must never be disassembled.
	The ● symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. The symbol at left means the powercord plug must be unplugged from the outlet.

⚠ Incorrect operation may cause injury

⚠ WARNING

Keep children away from the machine.
The machine includes areas and components that pose a hazard to children and may result in injury, blindness, choking, or other serious accident.

Never attempt to disassemble, repair, or modify the machine.
Doing so may result in fire, electrical shock, or injury. Entrust repairs to a trained service technician.

For accessories (optional and consumable items, power cord, and the like), use only genuine articles compatible with this machine.
Incompatible items may lead to an accident.

Never use the machine for any purpose for which it is not intended, or use the machine in an undue manner that exceeds its capacity.
Doing so may result in injury or fire.

⚠ CAUTION

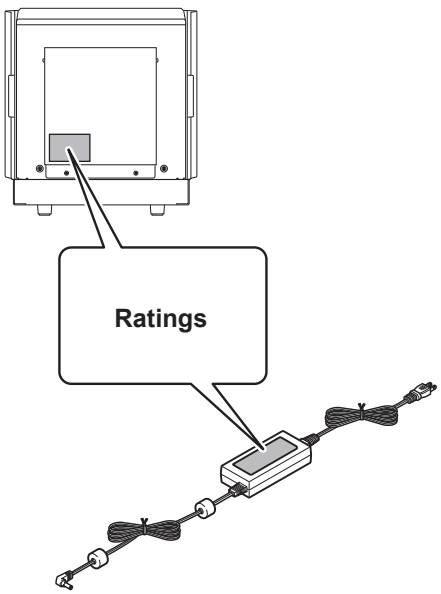
Install in a location that is level and stable.
Installation in an unsuitable location may cause an accident, including a fall or tip over.

Be sure to follow the operation procedures described in this documentation. Never allow anyone unfamiliar with the usage or handling of the machine to touch it.
Incorrect usage or handling may result in unexpected injury.

⚠ Danger of electrical short, shock, electrocution, or fire

⚠ WARNING

Connect to an electrical outlet that complies with this machine's ratings (for voltage, frequency, and current).
Incorrect voltage or insufficient current may cause fire or electrical shock.



Do not use with any power supply other than the dedicated AC adapter.
Use with any other power supply may lead to fire or electrocution.

Never use out of doors or in any location where exposure to water or high humidity may occur. Never touch with wet hands.
Doing so may result in fire or electrical shock.

Never allow any foreign object to get inside. Never expose to liquid spills.
Inserting objects such as coins or matches or allowing beverages to be spilled into the ventilation ports may result in fire or electrical shock. If anything gets inside, immediately disconnect the power cord and contact your authorized Roland DG Corp. dealer.

Never place any flammable object nearby. Never use a combustible aerosol spray nearby. Never use in any location where gases can accumulate.
Combustion or explosion may be a danger.

Handle the power cord, plug, and electrical outlet correctly and with care. Never use any article that is damaged.
Using a damaged article may result in fire or electrical shock.

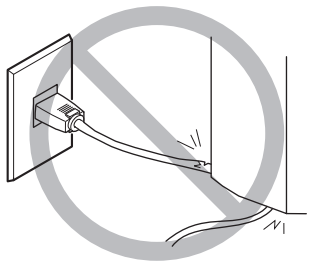
When using an extension cord or power strip, use one that adequately satisfies the machine's ratings (for voltage, frequency, and current).
Use of multiple electrical loads on a single electrical outlet or of a lengthy extension cord may cause fire.

When the machine will be out of use for a prolonged period, disconnect the power cord.
This can prevent accidents in the event of current leakage or unintended startup.

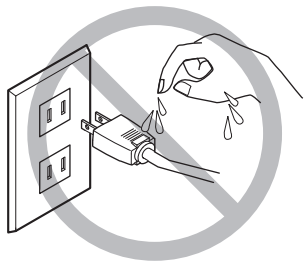
Position so that the power plug is within immediate reach at all times.
This is to enable quick disconnection of the power plug in the event of an emergency. Install the machine next to an electrical outlet. Also, provide enough empty space to allow immediate access to the electrical outlet.

If sparking, smoke, burning odor, unusual sound, or abnormal operation occurs, immediately unplug the power cord. Never use if any component is damaged.
Continuing to use the machine may result in fire, electrical shock, or injury. Contact your authorized Roland DG Corp. dealer.

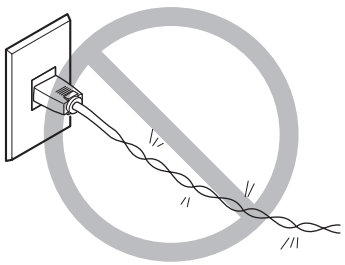
⚠ Important notes about the power cord, plug, and electrical outlet



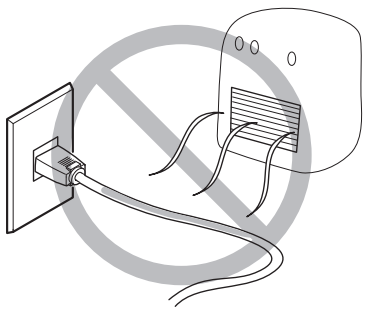
Never place any object on top or subject to damage.



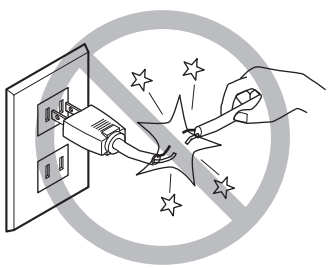
Never allow to get wet.



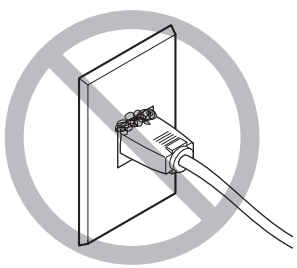
Never bend or twist with undue force.



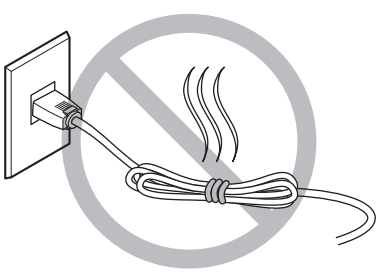
Never make hot.



Never pull with undue force.



Dust may cause fire.



Never bundle, bind, or roll up.

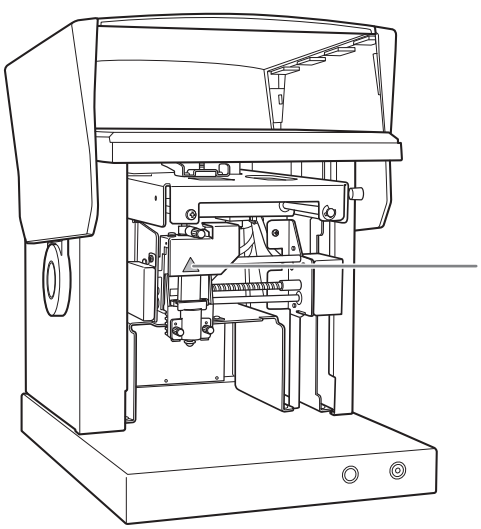
⚠ The head area becomes hot

⚠ WARNING

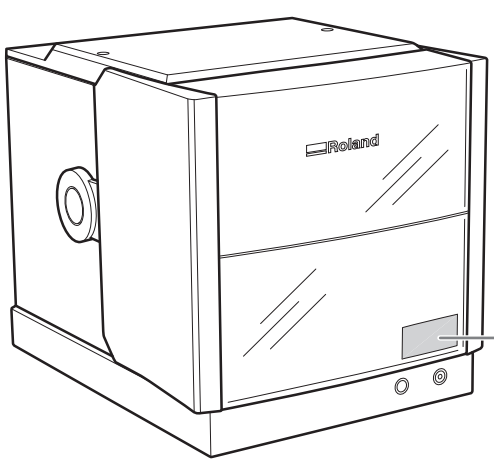
Never touch the head immediately after printing has finished.
Doing so may cause burns.

⚠ Warning Label

Warning label is affixed to make areas of danger immediately clear. The meaning of the label is as follows. Be sure to heed its warnings.
Also, never remove the label or allow it to become obscured.



Caution: High Temperature
Never touch immediately after printing.



CLASS 1 LASER PRODUCT
クラス 1 レーザ製品

Complies with IEC 60825-1 Ed. 2.0 (2007-03).
Complies with FDA performance standards for laser products except for deviations pursuant to Laser Notice No.50 dated June 24, 2007

Important Notes on Handling and Use

This machine is a precision device. To ensure the full performance of this machine, be sure to observe the following important points. Failure to observe these may not only result in loss of performance, but may also cause malfunction or breakdown.

This Machine is a Precision Device.

- Handle carefully, and never subject the machine to impact or excessive force.
- Never print material outside the range of specifications.

Install in a Suitable Location

- Install in a location having the specified temperature and relative humidity.
- Install in a quiet, stable location offering good operating conditions.
- Never use the machine in an environment where silicone substances (oil, grease, spray, etc.) are present. Doing so may cause poor switch contact.

When Moving the Machine

- When moving the machine, be sure to support it at the bottom using two hands. Attempting to move the machine by holding it at a different location may result in damage.
- When moving the machine to another location, be sure to attach the retainers. Attempting moving without attaching the retainers may result in damage.

Printing

- Never attempt to perform printing on the edges or over holes in printing material.
- Printing results may vary according to the original data, the material printed, and the details of settings. Before you perform actual printing, we recommend carrying out test printing.
- Attempting printing with no material loaded may damage the pin or heads.

About Operation Manuals

Documentation Included with the Machine

The following documentation is included with the machine.

➢ **MPX-90M User's Manual (this manual)**

This describes important notes for ensuring safe use, and explains how to install and operate the machine. It also explains how to install and operate included software.
Be sure to read it first.

➢ **METAZA Driver Online Help**
➢ **Roland METAZAStudio Online Help**
➢ **Roland SFEdit2 Online Help**

You view this documentation on your computer screen. Installing the respective programs makes these available for viewing. They describe in detail the commands used in the programs.

☞ P. 22, "How to Open the METAZA Driver Help," p. 23, "How to display help for software"

Chapter 1
Getting Started

1-1 About the Machine 12
- Features 12
- Names of Components 12
- Checking the Included Items 14

1-2 Installation 15
- Installation Environment 15
- Removing and storing the retainers 15
- Power Cord Connection 16

1-3 Installing the Software 17
- System Requirements 17
- The Software You Can Install and Set Up 17
- Installing the Driver and the Software 18

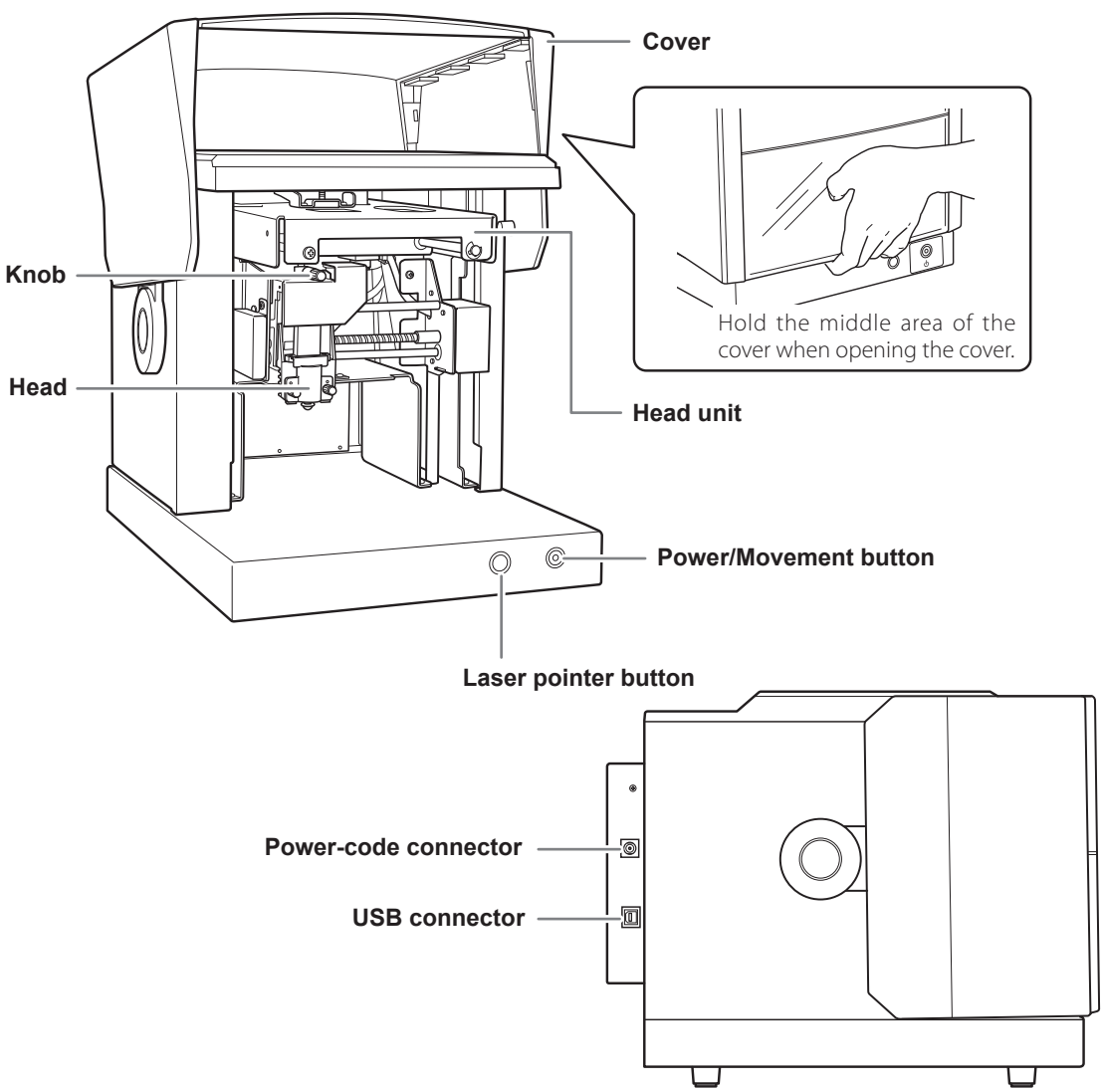
1-1 About the Machine

Features

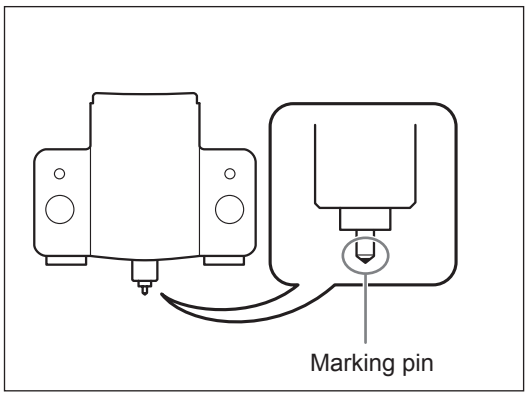
This machine is a direct marking printer. It prints images by striking detailed points using a marking pin mounted in a head.
You can print Data Matrix ECC200 and QR codes on small steel objects used for medical purposes. Even when printing different multiple codes in a row, you can continue printing without stopping to enter data for each instrument to be imprinted (Variable Printing).

Names of Components

This Machine



Head (MPH-90)

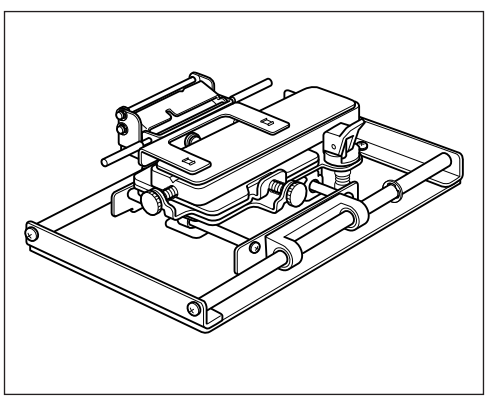


Printing is performed on material using with a marking pin. Diamond is attached to the tip of the marking pin. Since the head is a consumable part, replace it at an appropriate timing.

☞ P. 52, “Head Replacement”

Material Retainers

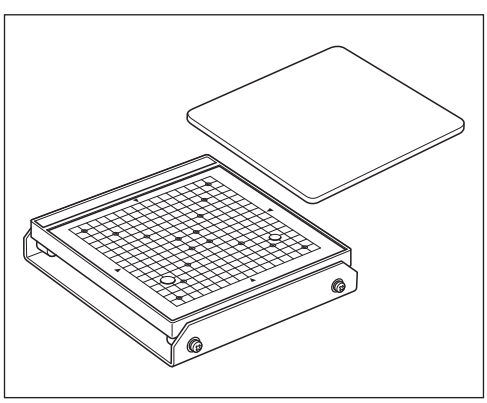
Vise



This is used to fix an instrument to be imprinted.

☞ P. 35, "STEP 1: Loading the Instrument to be Imprinted"

Table, Adhesive sheet

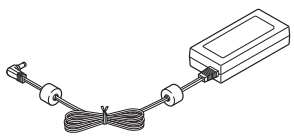
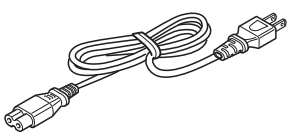
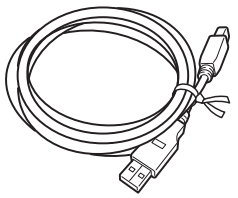
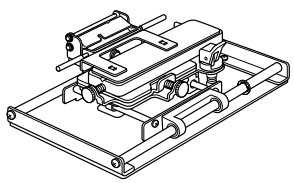
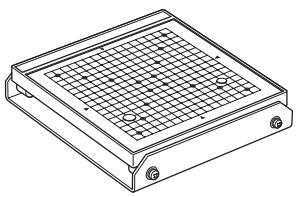
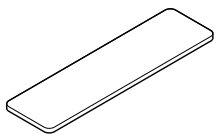
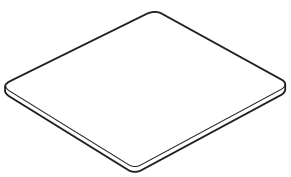
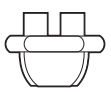
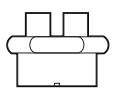
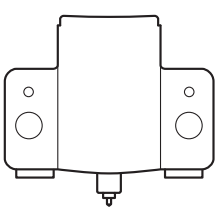
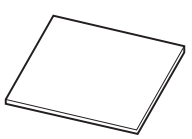
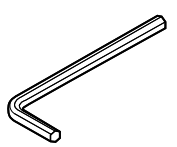
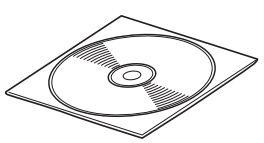
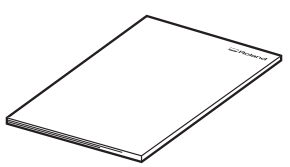


This is used to fix an instrument to be imprinted that cannot be secured using the vise. The adhesive sheet is placed on the table and then the instrument is placed on the sheet. This makes you to fix the objects without having to use commercially available tape or the like.

☞ P. 35, "STEP 1: Loading the Instrument to be Imprinted"

Checking the Included Items

The following items are packed together with the unit. Make sure they are all present and accounted for.

 **AC adapter (1)**	 **Power cord (1)**	 **USB cable (1)**
 **Vise (1)**	 **Table (1)**	 **Adhesive sheet for vise (1)** (Installed on the vice by default)
 **Adhesive sheet for table (1)**	 **Head caps (round bottom) (10)** (One installed on the unit by default)	 **Head caps (flat bottom) (10)**
 **Head (MPH-90) (1)** (Installed on the unit by default)	 **Test-use printing material (4) (Brass-plated plates)**	 **Hexagonal wrench (1)**
 **Roland Software Package CD-ROM (1)**	 **User's manual (1) (This document)**	

1-2 Installation

Installation Environment

Install in a quiet, stable location offering good operating conditions. An unsuitable location can cause accident, fire, faulty operation, or breakdown.

⚠CAUTION **Install in a location that is level and stable.**
Installation in an unsuitable location may cause an accident, including a fall or tip over.

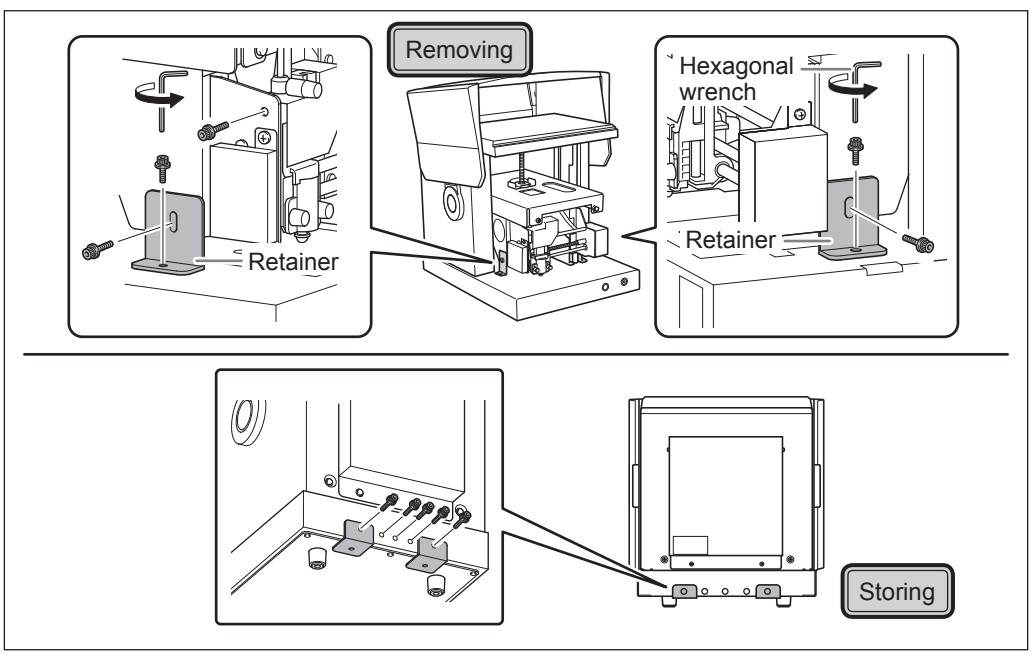
- Never install in a location subject to wide fluctuations in temperature or humidity.
- Never install in a location subject to shaking or vibration.
- Never install in a location where the floor is tilted, not level, or unstable.
- Never install in a dusty or dirty location, or out of doors.
- Never install in a location exposed to direct sunlight or near air-conditioning or heating equipment.
- Never install in a location exposed to considerable electrical or magnetic noise, or other forms of electro-magnetic energy.
- Never install in an environment where silicone substances (oil, grease, spray, etc.) are present.

Removing and storing the retainers

Retaining materials are attached to protect the machine from vibration during shipment. Remove these after emplacement.

- Remove all Retaining materials. Any that remain may cause faulty operation or breakdown when the power is switched on.
- The retaining materials and package are required when moving the machine to a different location. Store them carefully so that they do not get misplaced.

The machine is secured at three points (with 5 screws and 2 retainers). Remove all the screws and retainers with the provided hexagonal wrench.
Keep the screws and retainers by mounting them to the lower back side of the machine.



Power Cord Connection

IMPORTANT!

At this time, the connection to the computer must not be made yet.
Failure to follow the correct procedure may make installation impossible. You make the connection to the computer when you install METAZA driver.

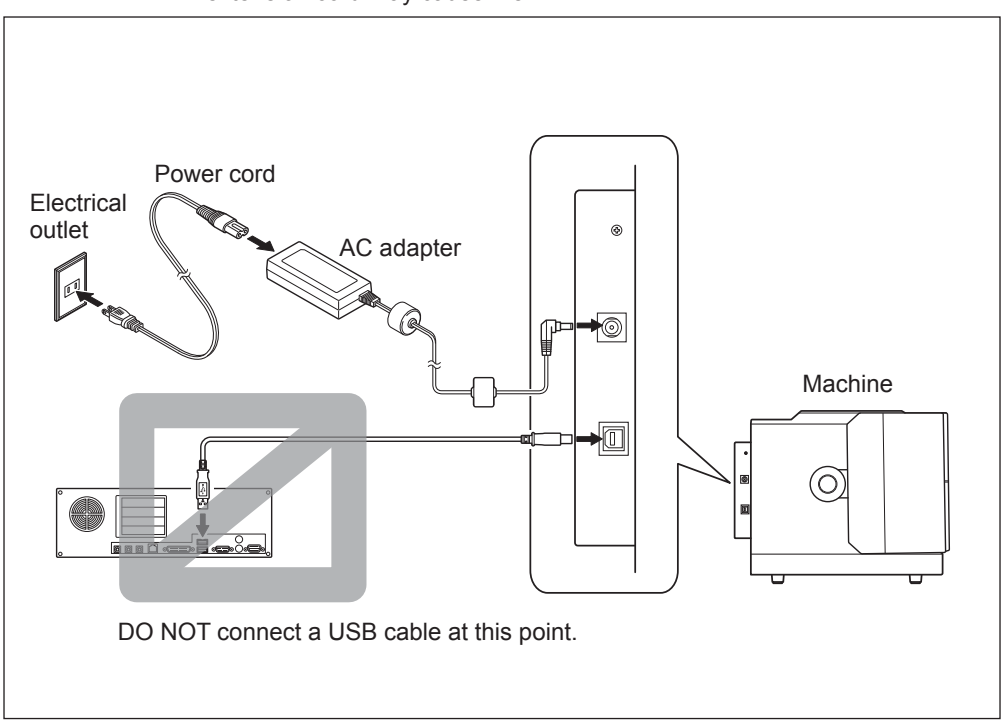
☞ P. 18, "Installing the Driver and the Software"

⚠WARNING **Do not use with any electrical power supply that does not meet the ratings displayed on the AC adapter.**
Use with any other power supply may lead to fire or electrocution.

⚠ WARNING **AC Never use any AC adapter and power cord other than the AC adapter and power cord included with the machine.**
Doing so may lead to fire, electrical shock, or electrocution.

⚠WARNING **Handle the power cord, plug, and electrical outlet correctly and with care. Never use any article that is damaged.**
Using a damaged article may result in fire or electrical shock.

⚠WARNING **When using an extension cord or power strip, use one that adequately satisfies the machine's ratings (for voltage, frequency, and current).**
Use of multiple electrical loads on a single electrical outlet or of a lengthy extension cord may cause fire.



1-3 Installing the Software

System Requirements

Operating system *	Windows XP/Vista/7 (32 bit edition/64 bit edition)
Processor	Intel® Core 2 Duo or greater (Core i5 or greater recommended)
Memory	1 GB or greater (2 GB or more recommended)
Optical drive	CD-ROM drive
Video card and monitor	At least 16 bit colors (High Color) with a resolution of 1024 x 768 or more recommended
Free hard-disk space required for installation	25 MB

* As this software is a 32-bit application, it runs on WOW64 (or Windows-On-Windows 64) under the 64-bit version of Windows.

For the latest information, see the Roland DG Corp. website (http://www.rolanddg.com).

The Software You Can Install and Set Up

METAZAStudio	This is a program for creating printing data. It enables you to import and print 2D symbol (QR code and the like) data. It also enables you to edit and create 2D symbol, directly enter text, and perform Variable Printing (even when printing different multiple codes in a row, you can continue printing without stopping to enter data for each instrument to be imprinted.)
SFEdit2	This is a program that lets you create and edit stroke fonts. Stroke fonts are line drawings created by automatically extracting the centerlines from a TrueType font. You can use the generated stroke fonts as fonts with METAZAStudio.
MPX-90M Head Manager	This is a utility for adjusting the head. Run it when you replace the head or adjust the marking pin.
METAZA Driver	This is a Windows-based driver required for sending data from a computer to the machine.

Installing the Driver and the Software

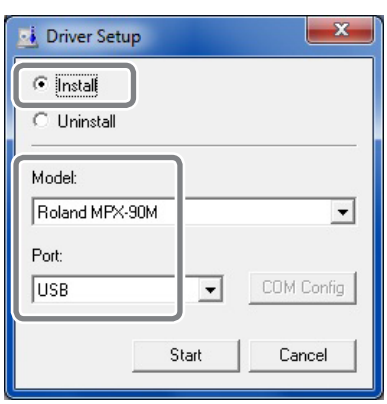
IMPORTANT!

Make sure to connect the machine to a computer by following the given procedure.
Failure to follow the correct procedure may make installation impossible.

Procedure

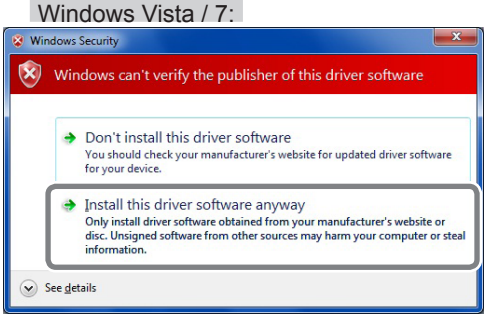
1. **Before you start installation and setup, make sure the USB cable is NOT connected.**
2. **Log on to Windows as "Administrators."**
3. **Insert the Roland Software Package CD-ROM into the computer.**
   Windows Vista/7: When the automatic playback window appears, click [Run menu.exe].
   The install menu appears automatically.
4.

   Click [Install].
   Install the METAZA driver and each software at a time.
   ☞ P. 17 "The Software You Can Install and Set Up"
   You can install the driver and each software separately.
   ☞ P. 72, "To install METAZA driver separately", P. 76 "To Install Software Separately".

   When using Windows Vista or Windows 7: If the [User Account Control] screen is displayed, click [Allow] or [Yes].
5. 

   Select [Install], Model name [Roland MPX-90M], Port [USB], and then click [Start].
   Installation of the METAZA driver starts. Proceed with the installation by following the on-screen instructions.

Windows Vista / 7:


Windows Security
Windows can't verify the publisher of this driver software
Don't install this driver software
You should check your manufacturer's website for updated driver software for your device.
Install this driver software anyway
Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.
See details

If the screen shown in the figure appears, click [Install this driver software anyway].

Windows XP:

Software Installation
The software you are installing has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the software vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

If the screen shown in the figure appears, click [Continue Anyway].

6 Follow the on-screen instructions and continue with the installation.

Installation information for each software item will be displayed automatically as needed.

7 When installation is complete, click in the installation menu.

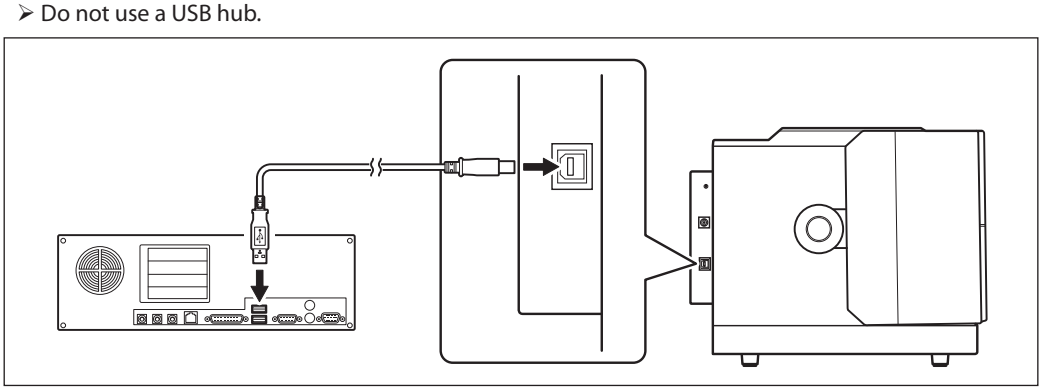
8 Remove the Roland Software Package CD-ROM from the computer.

9 Switch on the power to the machine.

☞ P. 27, “STEP 1: Switching On the Power”

10 Connect the machine to the computer by USB cable.

- Never connect two or more machines to one computer.
- Use the supplied USB cable.
- Do not use a USB hub.



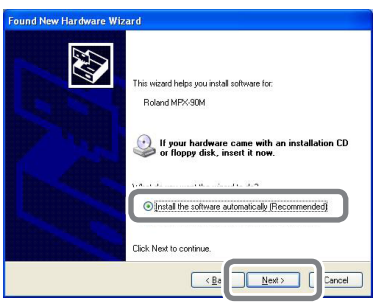
Windows Vista / 7:

The driver is installed automatically.

Windows XP:

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission).
Read our privacy policy
Can Windows connect to Windows Update to search for software?
Yes, this time only
No, not this time
Click Next to continue.
Next >
Cancel

① Select [No, not this time], and then click [Next].


Found New Hardware Wizard
This wizard helps you install software for:
Roland MPX-90M
If your hardware came with an installation CD or floppy disk, insert it now.
Install the software automatically (Recommended)
Click Next to continue.
Next >
Cancel

② Select [Install the software automatically], and then click [Next].

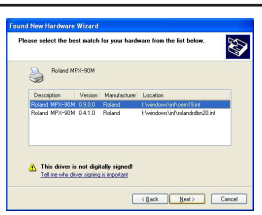
Found New Hardware Wizard
Completing the Found New Hardware Wizard
The wizard has finished installing the software for:
Roland MPX-90M
Click Finish to close the wizard.
Finish
Cancel

③ Click [Finish].

If this screen appears during installation

Hardware Installation
The software you are installing for this hardware:
Printers
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

Click [Continue Anyway].

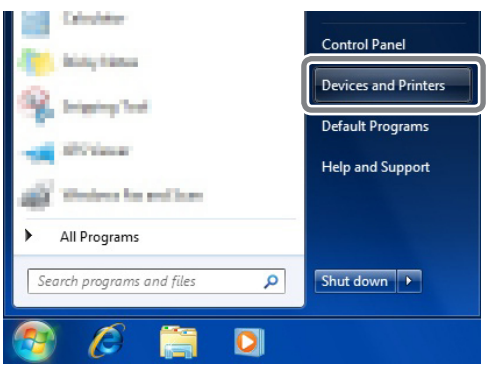


Remove the Roland Software Package CD-ROM from the computer, click [Back], and start over from the previous screen.

How to Open the METAZA Driver's Printing Preferences Screen

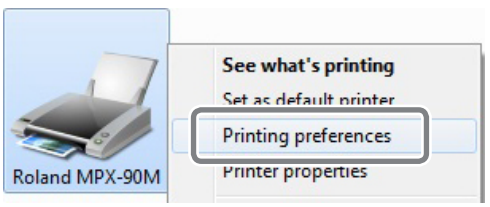
Procedure

❶



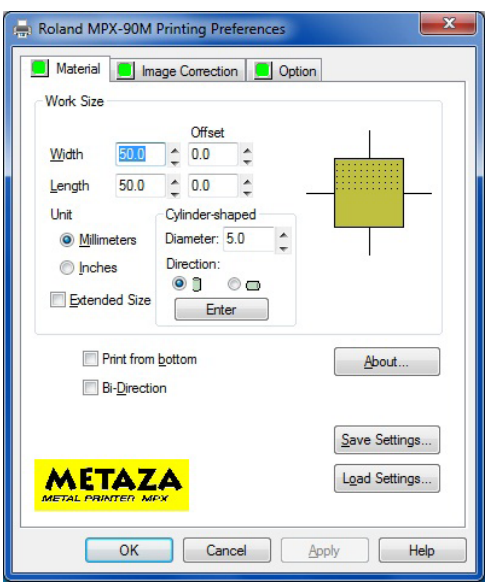
From [start] menu ( ), click [Devices and Printers] (or [Printers and Faxes]).

❷



Right-click the [Roland MPX-90M] icon, and then click [Printing Preferences].

The METAZA driver's Printing Preferences screen opens.

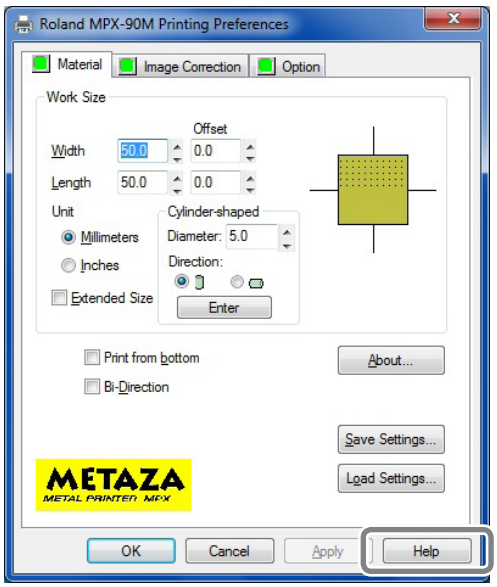


Printing Preferences dialog box

How to Open the METAZA Driver Help

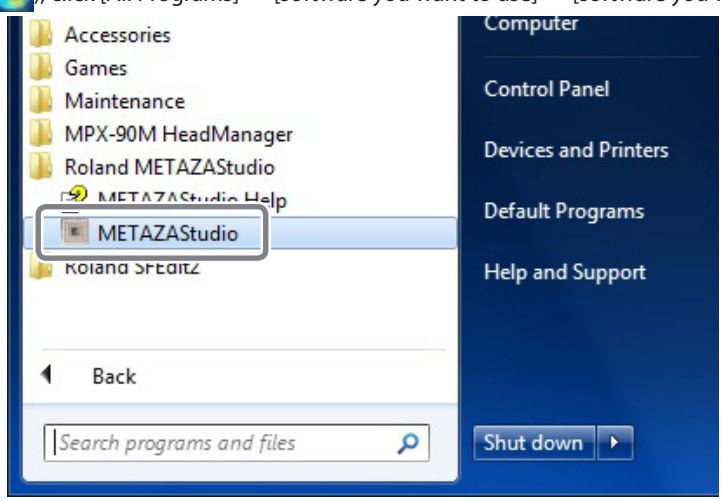
Open the METAZA driver's Printing Preferences screen, and then click [Help].

☞ P. 21 "How to Open the METAZA Driver's Printing Preferences Screen"



How to Start The Software

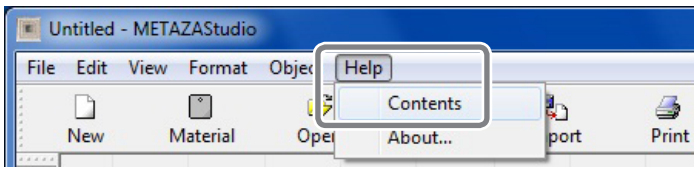
From start menu ( ), click [All Programs] → [software you want to use] → [software you want to use].



How to display help for software

Start the software, and then click [Help] → [Table of Contents] from the menu.

☞ P. 22, "How to Start The Software"



Chapter 2
Printing

2-1 Preparing for Printing.....26
Getting Started: Checking Print Workflow 26
STEP 1: Switching On the Power.....27
STEP 2: Specifying Output Destination for METAZAStudio 28
STEP 3: Preparing Instrument to be Imprinted.....28
STEP 4: Preparing Print Data.....30
2-2 Starting Printing 35
STEP 1: Loading the Instrument to be Imprinted 35
STEP 2: Making Prints 43
STEP 3: Finishing Printing (Switching Off the Power).....45
2-3 Finishing and Stopping Printing Operations 46
Stopping Printing Operations.....46
Deleting Data from Print Queue 46

2-1 Preparing for Printing

Getting Started: Checking Print Workflow

Preparing the MPX-90M machine

Switch on the power of the machine and select it as the output destination for the computer.

☞ P. 27, "STEP 1: Switching On the Power," p. 28, "STEP 2: Specifying Output Destination for METAZAStudio"

Preparing an instrument to be imprinted

Check the several conditions for thickness, hardness, and the like that an instrument to be imprinted needs to meet.

☞ P. 28, "STEP 3: Preparing Instrument to be Imprinted"

Preparing print data

Create print data mainly using CSV files.

☞ P. 30, "STEP 4: Preparing Print Data"

Starting printing

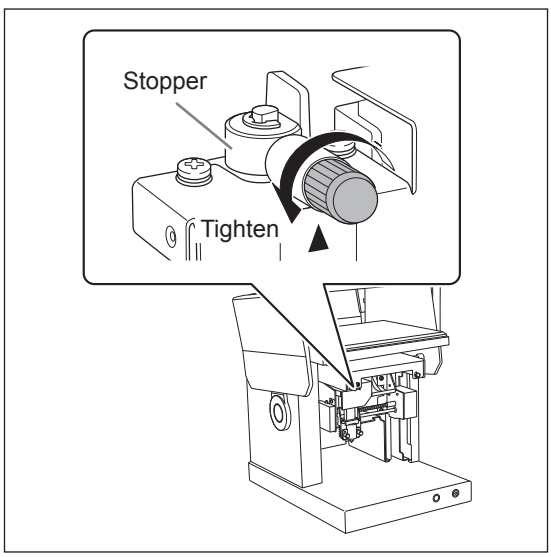
Set the instrument to be imprinted in the machine and output print data from METAZAStudio.

☞ P. 35, "STEP 1: Loading the Instrument to be Imprinted" p. 43, "STEP 2: Making Prints"

STEP 1: Switching On the Power

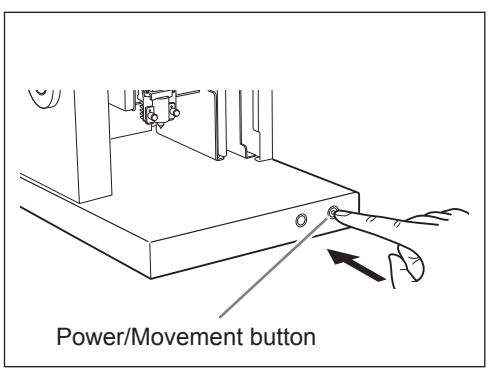
Procedure

❶



Open the cover and loosen the head's stopper.

❷



Press the Power/Movement button.
The Head moves to the left rear, and the lamp of the Power/Movement button is turned ON. This operation is called initialization.

When the power lamp remains blinking
An initialization error. Loosen the stopper of the head, and then press the Power/Movement button. The error is cleared, and the power lamp is lit.

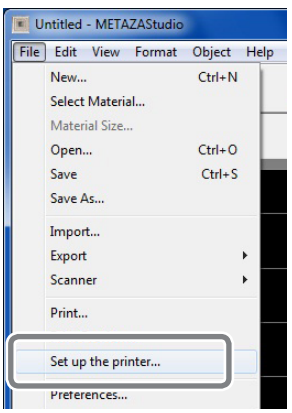
STEP 2: Specifying Output Destination for METAZAStudio

Procedure

❶ **Start METAZAStudio.**

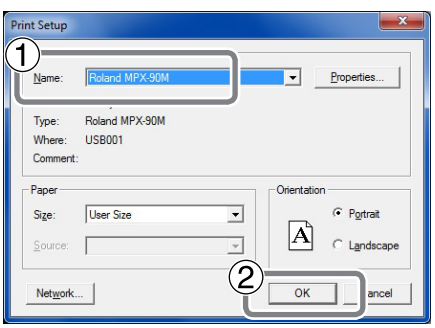
☞ P. 22, "How to Start The Software"

❷



Click [File] → [Set up the printer].
The [Print Setup] dialog box appears.

❸



① **Select [MPX-90M].**
② **Click [OK].**

STEP 3: Preparing Instrument to be Imprinted

The requirements for the instrument to be imprinted by the machine are described below. The instrument needs to meet all these requirements.

Thickness

Using vise : 0.3 to 20 mm (0.012 to 0.8 in.)
Using table : 0.3 to 40 mm (0.012 to 1.5 in.)

Size

The instrument is large enough to be firmly secured.
The machine uses the vise or adhesive sheet to secure the instrument to be imprinted. Though it is accepted even if the size of the instrument is the one to protrude from the vise or adhesive sheet, the essential requirement is that the instrument can be firmly secured.

Hardness of surface to print

Hardness of surface to print Vickers hardness (HV) of 200 or less

Materials which may crack or split by printing (such as glass, stone, precious stones, china, and porcelain) cannot be printed even if hardness is within the preceding range.

Attempting to print such materials may damage the machine.

Vickers hardness (HV) is used as a yardstick to represents the hardness of industrial materials. For the information on the hardness of the instrument to be imprinted, please contact the shop where you bought the instrument or its manufacturer.

Surface form

The instrument must not have the surface form described below.

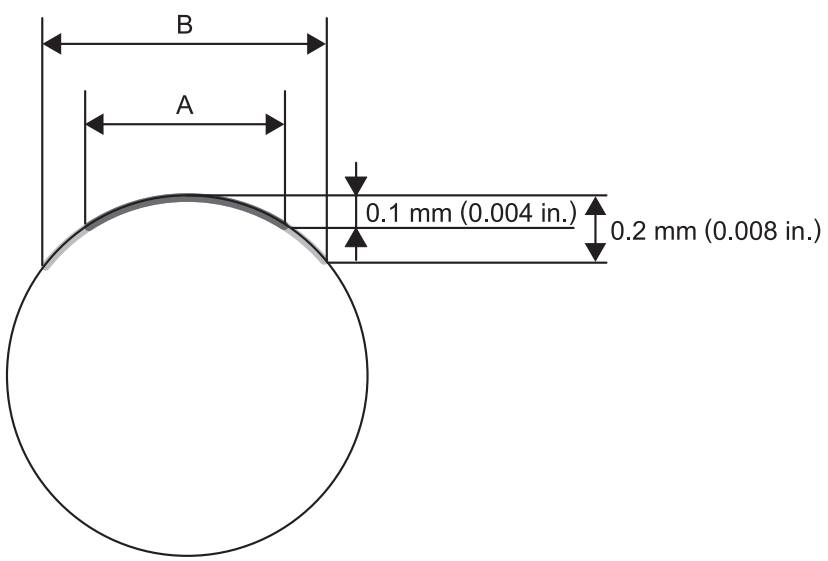
- **The surface to be imprinted is uneven, and the surface comes into contact with the moving part of the machine when material is set or when printing is made.**

Conditions for Material When Printing Curved Surfaces

The table and figure below show the printing-assured area and the area reached by the marking pin with respect to the diameter of the cylinder. Note, however, that the following conditions are assumed.

- The head cap is used.
- The material has circularity.

Diameter of cylindrical material	Recommended printable area (A)	Area reached by the marking pin (B)
10 mm (0.3 in.)	2.0 mm (0.079 in.)	2.8 mm (0.11in.)
20 mm (0.7 in.)	2.8 mm (0.11 in.)	4.0 mm (0.16 in.)
30 mm (1.1 in.)	3.4 mm (0.14 in.)	4.8 mm (0.19 in.)



Note : For printing on curved surfaces, regardless of the shape or composition of the material, the image quality of photographic data cannot be assured. For printing on curved surfaces, regardless of the shape or composition of the material, the image quality of photographic data cannot be assured.

STEP 4: Preparing Print Data

The method of preparing print data for [Variable Printing] is explained below. Variable Printing needs a CSV file. You can create a CSV file using database files. For information on creating a CSV file, contact the administrator of databases.
What you print is [Text] or [2D Symbol]. "Data Matrix" or "QR code" is selectable as 2D symbol.

What is Variable Printing?
In the [Variable Printing], you can replace a part of print data with new one for each sheet and print each different object. When you use Variable Printing, you no longer need to create new data each time when you load a small steel medical object. You can continue to print different data without interruption.

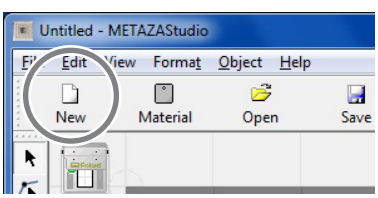
* You can create 2D symbol directly from METAZAStudio instead of a CSV file.
☞ P. 56, "Directly Creating 2D Symbol"

1. Create [Variable Field].

What is [Variable Field]?
Variable field is a frame in which you can place 2D symbol or text. In Variable Printing, data within the variable field is replaced with other one during printing.

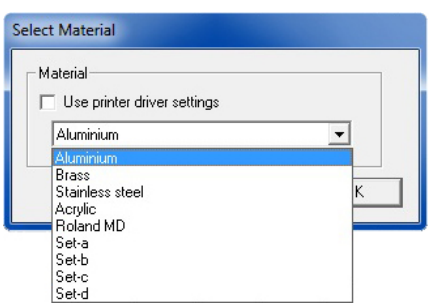
❶ Start METAZAStudio.

☞ P. 22, "How to Start The Software"
The [Select Material] dialog box appears.



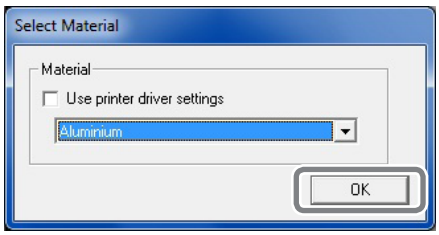
If METAZAStudio is running, click Image .
The [Select Material] dialog box appears.

❷



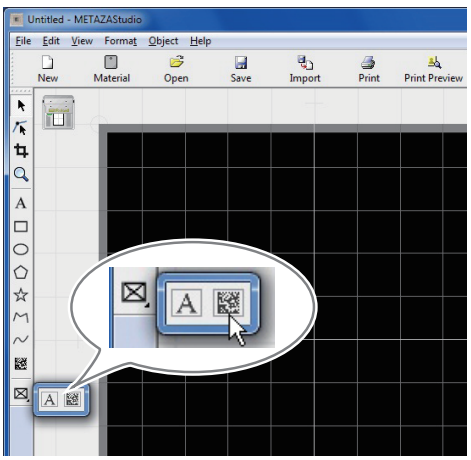
In the [Select Material] dialog box, select the material of the instrument to be imprinted.
Uncheck the [Use printer driver settings] checkbox to select a type of material. To use material that is not included in the list, you can register the material.
☞ P. 59, "Registering a Composition and Adjusting the Striking Force"
If you use the driver's setting without changing it, check the [Use printer driver settings] checkbox.

❸



Click [OK].

❹



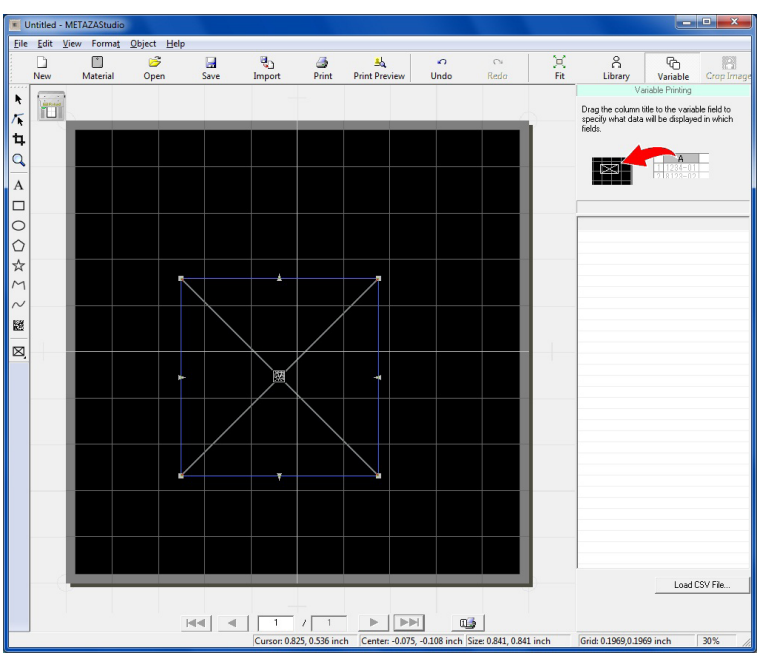
In the case of [2D Symbol]
Click ⊠ and then ▦.

In the case of [Text]
Click ⊠ and then A.

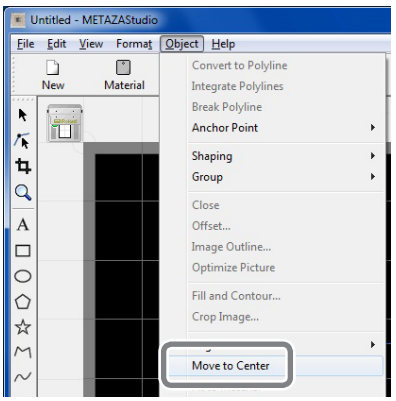
❺ **Drag the mouse (move while holding down the left button of the mouse) diagonally downward on the work area* in METAZAStudio.**

[Variable Field] in which you can place [2D Symbol] or [Text] is created.

* Work area = black area on the screen


Untitled - METAZAStudio
File Edit View Format Object Help
New Material Open Save Import Print Print Preview Undo Redo Fit Library Variable Crop Image
Variable Printing
Drag the column title to the variable field to specify what data will be displayed in which fields.
Load CSV File...
Cursor: 0.825, 0.536 inch
Center: -0.075, -0.108 inch
Size: 0.841, 0.841 inch
Grid: 0.1969,0.1969 inch
30%

6

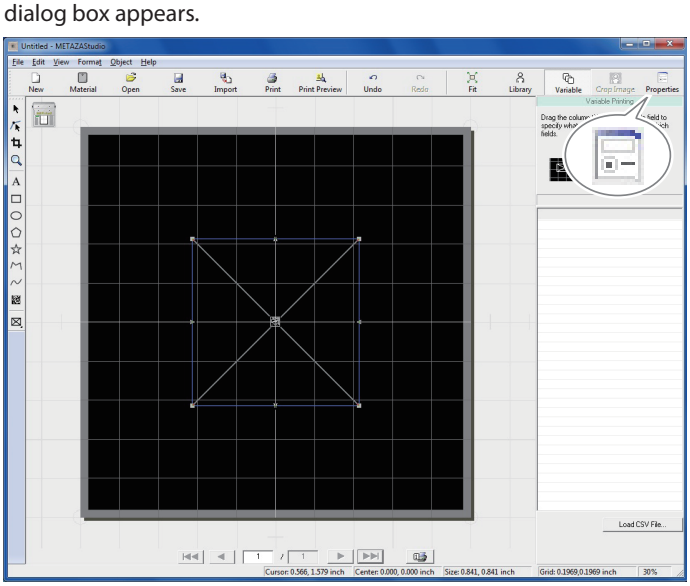


Click [Object] > [Move to Center].
The center of the Variable field moves to the center of the work area.

IMPORTANT!

This work is important, being related to the actual printing position.
In the machine, the center in printing operation is defined as the reference point in printing operation. The "center of the work area" in METAZAStudio coincides with the reference point in printing operation. Consequently, making the "center of the Variable field" coincide with the center of the work area means making the "center of the Variable field" coincide with the "reference point in actual printing operation."
Though you can print without making the center of the [Variable Field] coincide with the "reference point in printing operation, "making these points coincide with each other ensures the ease of placing printed text and image at the desired location.

7 **Click** .
The [Properties] dialog box appears.



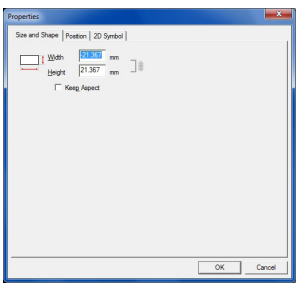
If the Variable field is not selected, you cannot click . If you cannot click , click and then click (select) the Variable field.

❽ **Make the settings for properties including [Size] of the Variable field.**

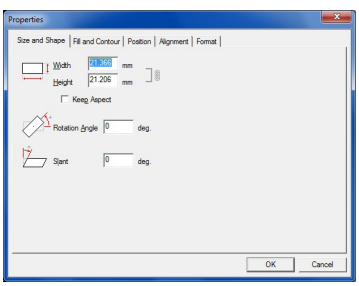
The setting items you can specify are different between [2D Symbol] and [Text]. For details on each setting, refer to the help for METAZAStudio ([Commands]-[Object] menu-[Properties]-[Properties] dialog.

☞ P. 23, "How to Display Help for Software"

[Properties] dialog box for 2D symbol



[Properties] dialog box for text



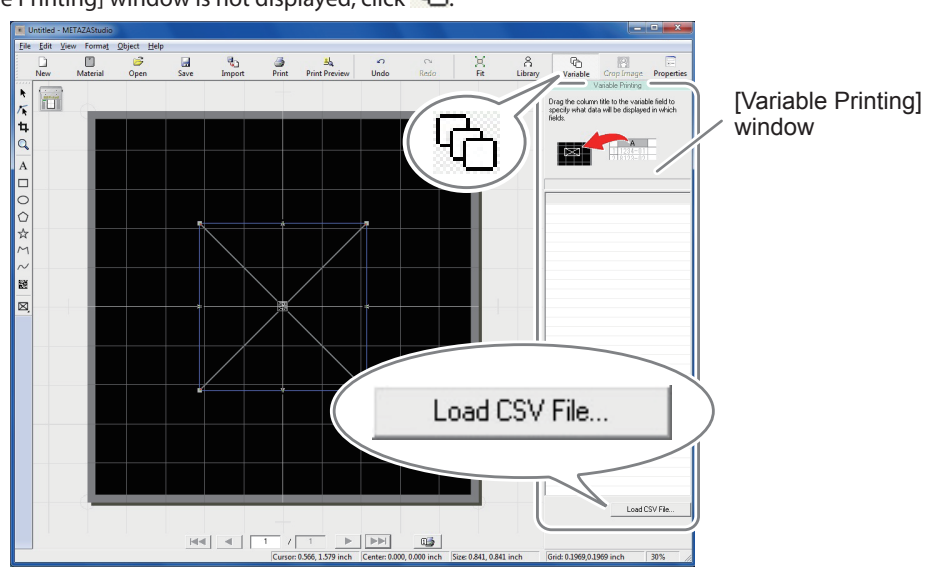
After making the settings, click [OK].

2. Place [2D Symbol] or [Text] inside the [Variable Field].

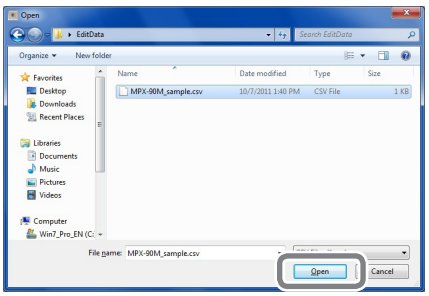
❶ **Click [Load CSV File].**

The [Open...] dialog box appears.

If the [Variable Printing] window is not displayed, click .

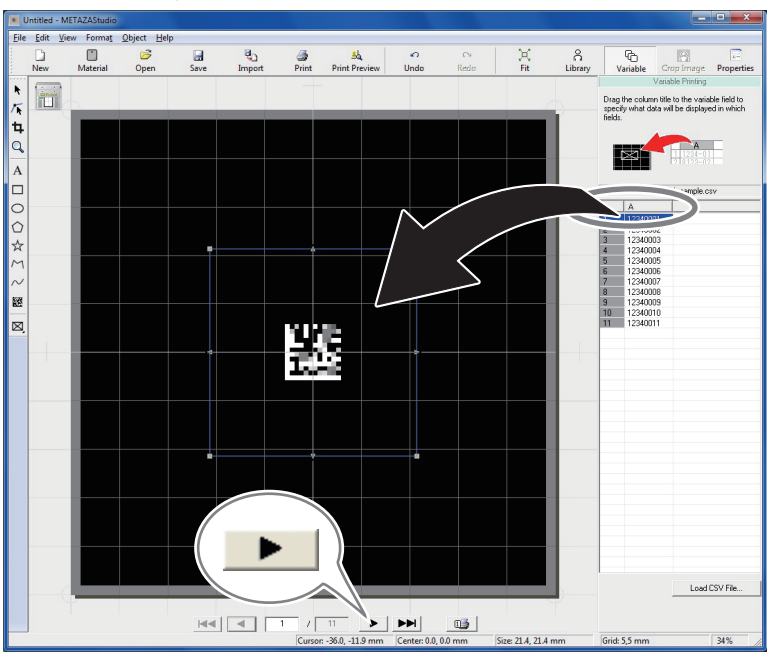

Untitled - METAZAStudio
File Edit View Format Object Help
New Material Open Save Import Print Print Preview Undo Redo Fit Library Variable Crop Image Properties
Variable Printing
Drag the column title to the variable field to specify what data will be displayed in which fields.
Load CSV File...
[Variable Printing] window

❷



Specify a CSV file and click [Open].
The specified CSV file is imported into METAZAStudio.

❸ **Drag and drop the column title of the imported CSV file into the [Variable Field]**
[2D Symbol] or [Text] is displayed in the [Variable Field].



You can display each symbol in turn by clicking . If you want to change the size or location of the Variable Field or the cell size of the 2D symbol, open the [Properties] dialog box and change the settings.

Now the print data is prepared. Go to "2-2 Starting Printing" in P. 35.

2-2 Starting Printing

STEP 1: Loading the Instrument to be Imprinted

Decide whether you use the vise or table as a retainer depending on the size or shape of the instrument to be imprinted. The criteria used to select the vise or table are as follows:

- **Vise ⇨ The size and shape of the instrument that can be fixed by vise.**
- **Table ⇨ The instrument has a flat bottom and the size and shape of the instrument that can not be fixed by vise.**

1. Attach the head cap.

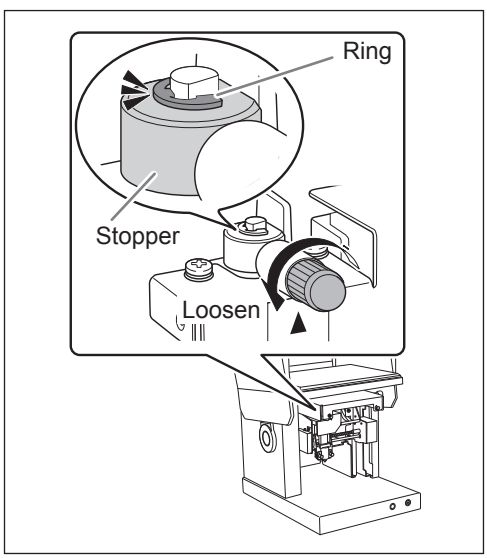
❶ **Make sure that preparations for printing are completed.**

☞ P. 26, "2-1 Preparing for Printing"

❷ **If the head unit is lowered, press the Power/Movement button.**

The head moves to the left rear.

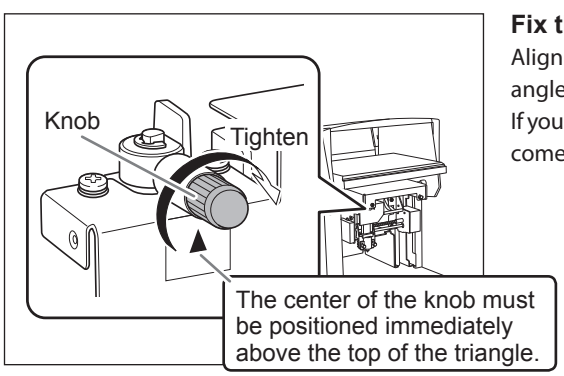
❸



Loosen the head's stopper.

The stopper and ring contact each other.

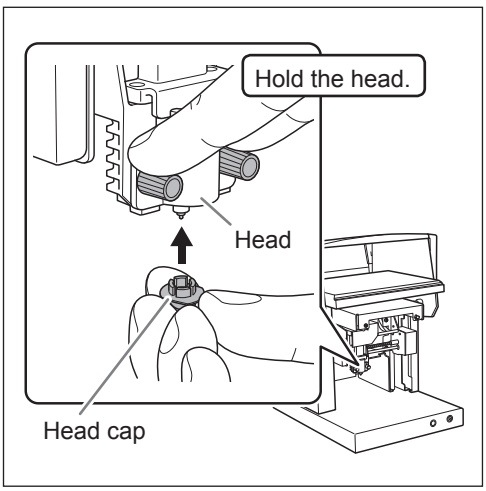
❹



Fix the head's stopper.

Align the center of the knob with the top of the triangle right below and then secure the stopper.
If you printing as the stopper is loose, the knob might come off due to vibration.

❺

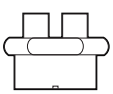


Attach a head cap to the tip of head.

Mount it as lightly holding the head as shown in the figure. The "Tighten" is attached correctly when its tab clicks.

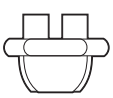
About the shape of head cap

There are two different types of head caps with a different shape. Select the one appropriate for a printing surface.



Flat bottom type

This is suitable for printing on a flat surface. As this head cap cannot track a curved surface or slope well, it is unsuitable for printing on these surfaces. It has high abrasion resistance against a printing surface and can be used for a long time.



Round bottom type

As this head cap can easily track a curved surface or slope, it is suitable for printing on these surfaces. This head cap, however, tends to be worn out compared to the flat bottom type.

Precautions for use of head cap

Remove dirt and dust from the printing surface.

If you carry out printing without removing dirt and dust attached to the printing surface, it may deteriorate the printing quality. Make sure to remove dirt and dust from the printing surface before you perform printing.

For test printing, it is advisable to use materials with no scratches or stains.

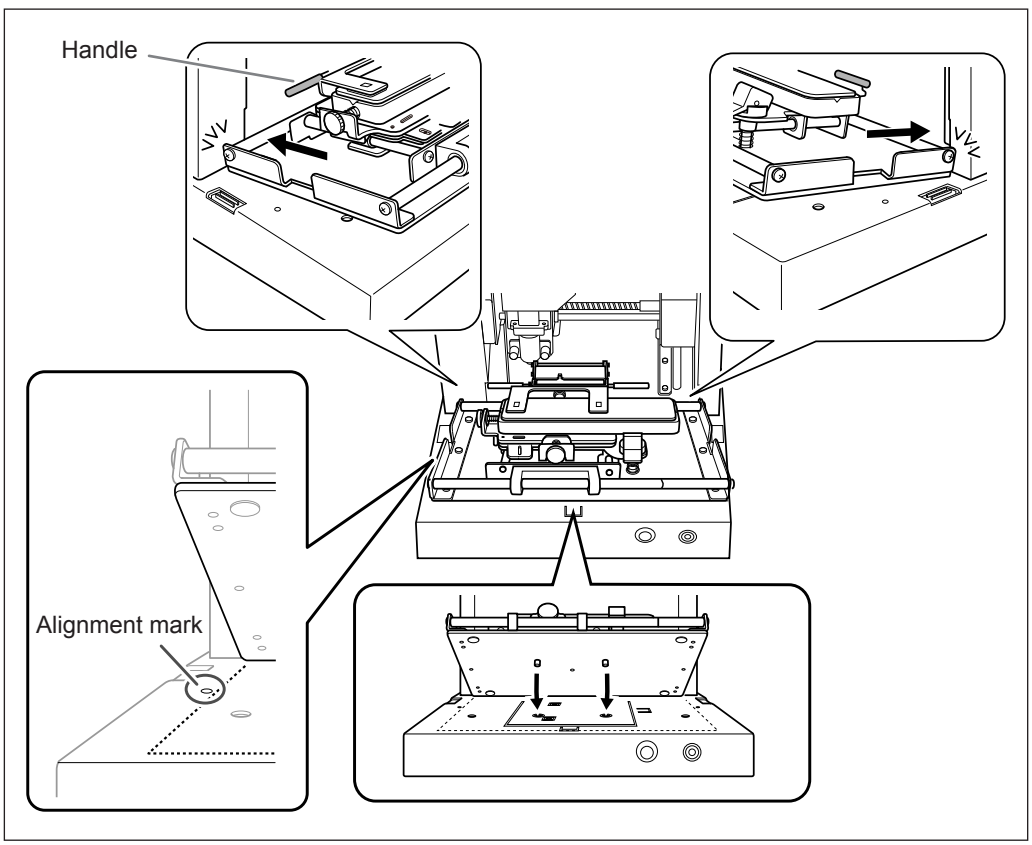
Some materials may cause scratches and stains on the head cap during printing, which may affect the printing quality. Scratches and stains on the materials may also damage the head cap and result in poor-quality printing. Therefore, for your prior checks on printing, we recommend you perform test printing with materials without any scratches or stains.

2. Load the instrument to be imprinted on the vise.

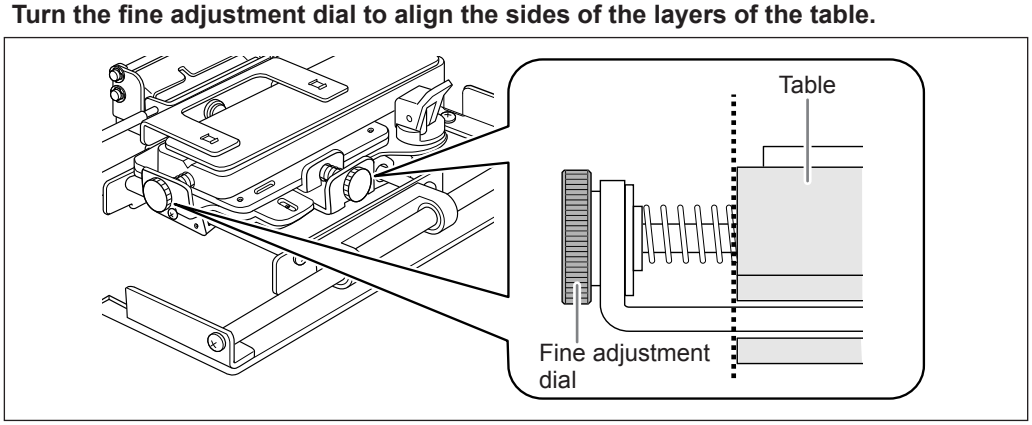
When using the table, go to P. 40.

❶ **Push the rear side of the vise (where the handle is placed) against the main unit. Align the sides of the vise with the alignment marks and lower the front side of the vise.**

When the tabs on the bottom of the vise fit into the holes on the unit, this completes mounting of the vise.

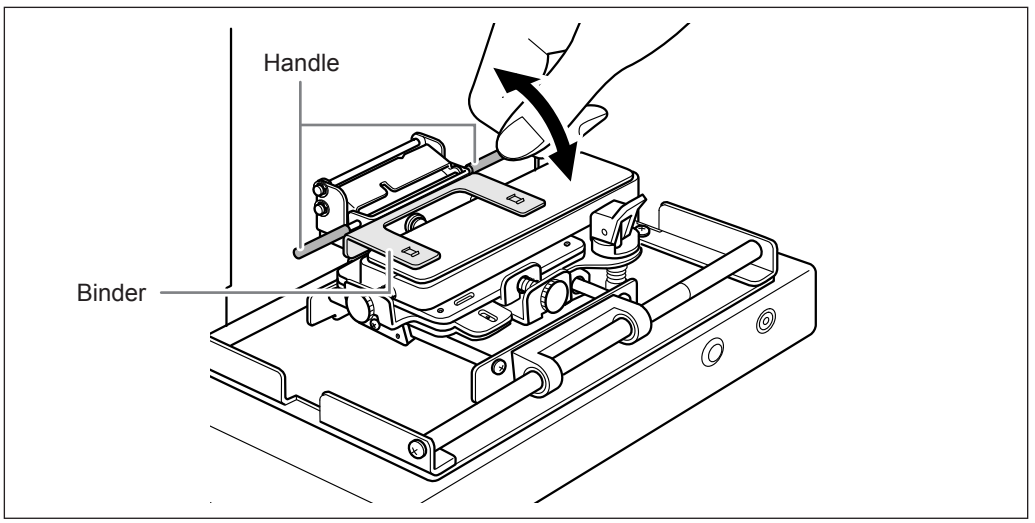


❷ **Turn the fine adjustment dial to align the sides of the layers of the table.**



❸ **Raise the vise binder.**

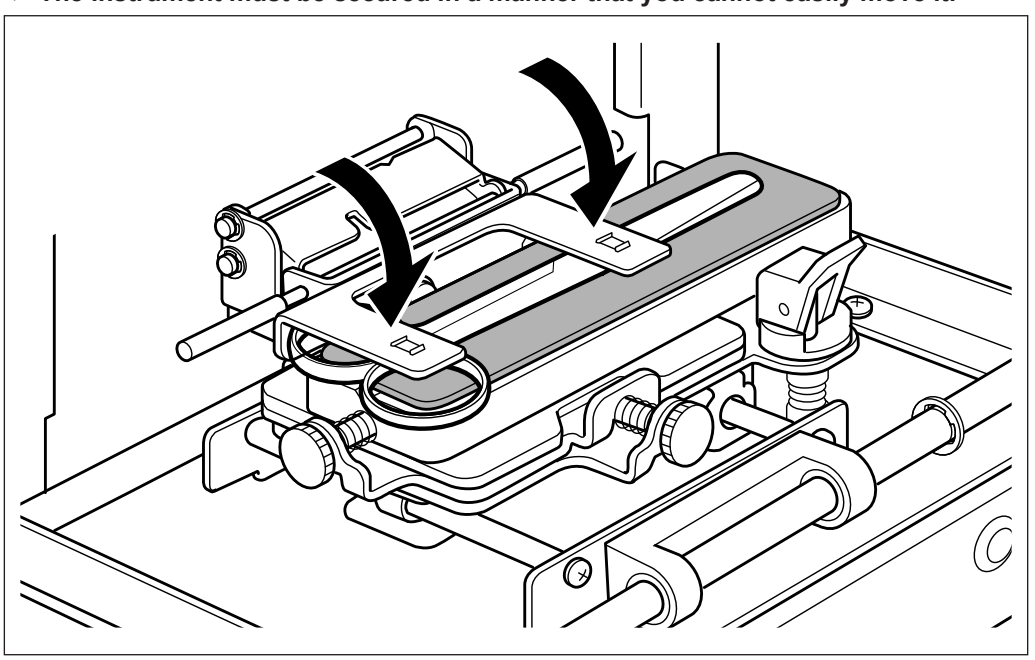
When raising or lowering the binder, be sure to hold its handle.



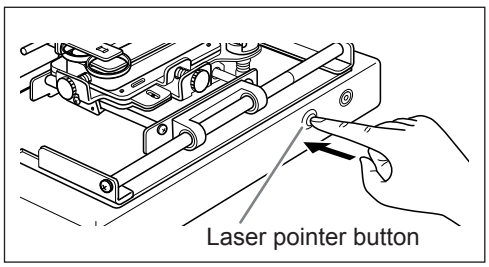
❹ **Place the instrument to be imprinted on the table of the vise and lower the binder.**

Follow the instructions below and determine the position of the instrument.

- **The area to be imprinted must be within the resin sheet on the table.**
- **The area to be imprinted must be 10 mm (0.39 in.) or more away from the outline of the binder.**
- **The instrument must be secured in a manner that you cannot easily move it.**



❺



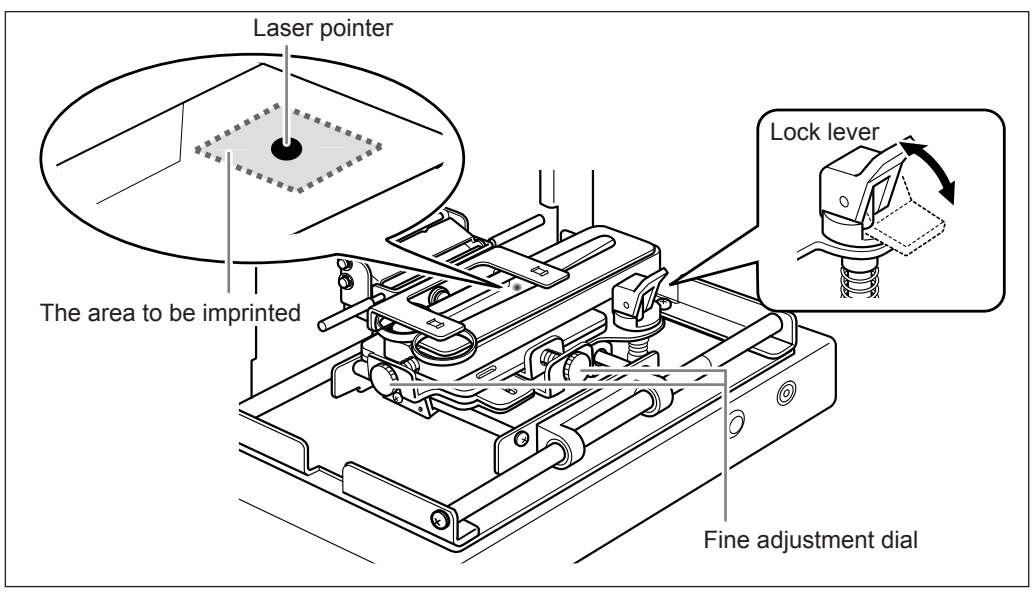
Press the laser pointer button.
The laser pointer is irradiated.
If the machine is idle for 5 minutes, the laser pointer is automatically turned off.

❻ **① Raise the lock lever.**
② Move the table so that the laser pointer points at the center of the area to be imprinted.
To finely adjust the table position, use the fine adjustment dial. The table position is adjustable within the range of ± 2 mm (0.08 in.).

POINT!

The position to which the laser pointer points coincides with the center of the work area in METAZAStudio. By making the position to which the laser pointer points coincide with the center of the area to be imprinted, you can print with the exactly same layout as the one displayed on the METAZAStudio's work area.

③ Lower the lock lever.



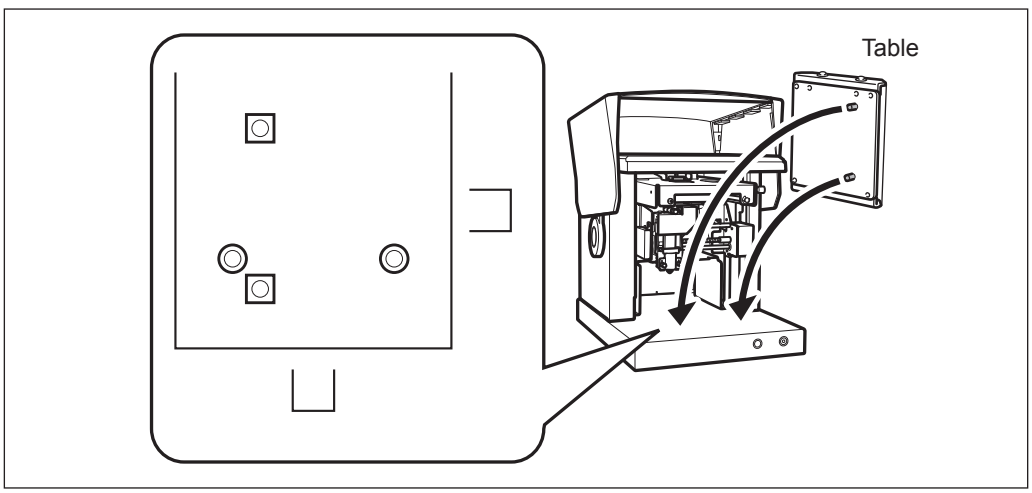
If you print using the head cap, this completes loading of the instrument to be imprinted. Go to "STEP 2: Making Prints."
If you use no head cap, go to Step 3. in P. 42.

2. Load the instrument to be imprinted on the table.

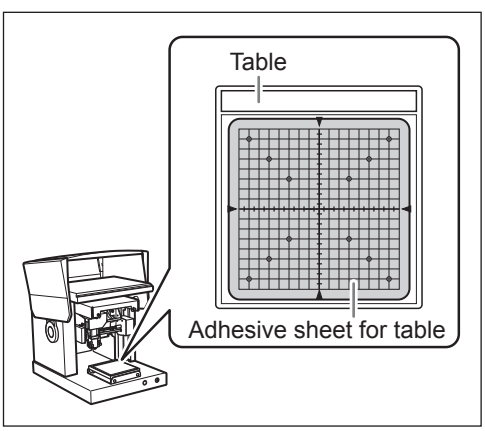
When using the vise, go to P. 37.

❶ Set the table.

Place the table by aligning it with the frame on the unit. When the tabs on the bottom of the table fit into the holes on the unit, this completes setting of the table.



❷



Affix the adhesive sheet for table to the table.

Place the adhesive sheet straight inside the table frame by aligning it with the scale marks. Be careful not to allow any air bubbles to form between the table and adhesive sheet.

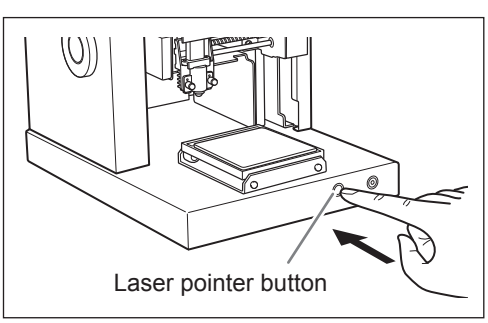
POINT!

- If the adhesive force has been educed, then wash the adhesive sheet.

☞ P. 48, "Cleaning the Adhesive Sheet"

- Never rub the surface with force. Doing so may damage the surface and reduce its adhesive strength.

❸



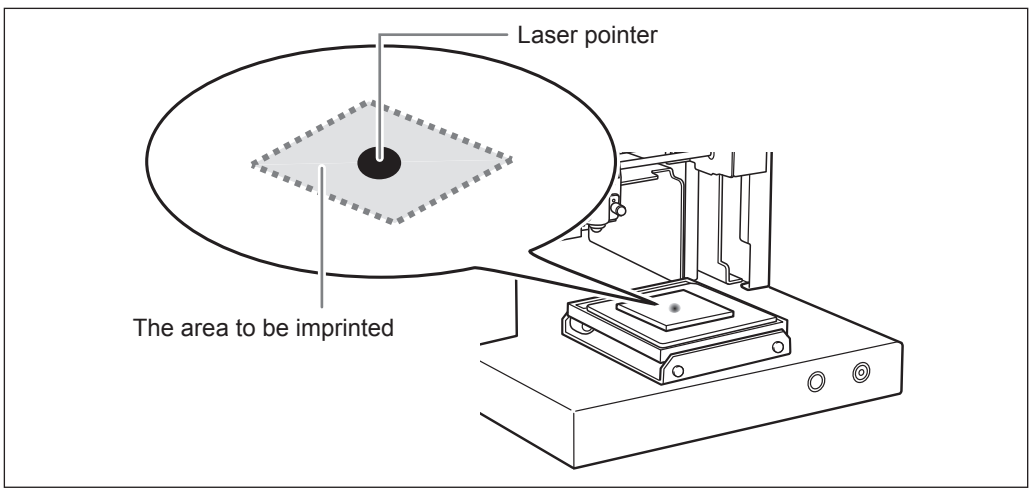
Press the laser pointer button.

The laser pointer is irradiated.

If the machine is idle for 5 minutes, the laser pointer is automatically turned off.

4 Load the instrument to be imprinted on the adhesive sheet.

Move the table so that laser pointer points at the center of the area to be imprinted.
Gently press the instrument to be imprinted in a way that you affix it to the adhesive sheet.
If the instrument protrudes from the table and the instrument tilts, place a support in order to keep the instrument horizontal.



POINT!

The position to which the laser pointer points coincides with the center of the work area in METAZAStudio. By making the position to which the laser pointer points coincide with the center of the area to be imprinted, you can print with the exactly same layout as the one displayed on the METAZAStudio's work area.

If you print using the head cap, this completes loading of the instrument to be imprinted. Go to "STEP 2: Making Prints."
If you use no head cap, go to the following step *3*.

IMPORTANT!

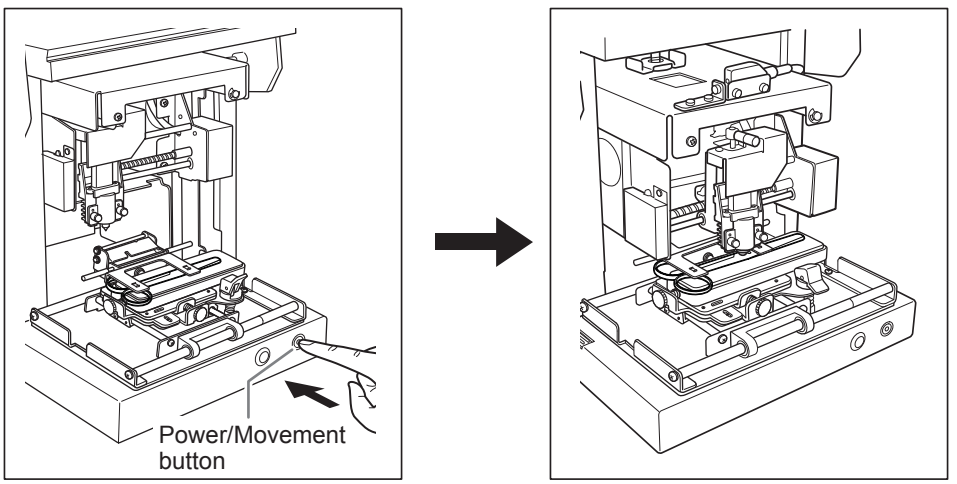
Using the head cap is usually recommended.

When the head cap is used, the machine automatically tracks the surface height of material and sets the position of the head. You can make a print on a curved surface. (There is an upper limit of the height that can be tracked.) It is recommended to use the head cap for usual printing.

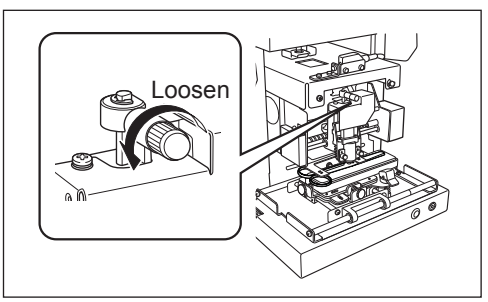
3. Fix the height of the head. (Only when no head cap is used)

❶ **Press the Power/Movement button.**

The head moves and stops at the position where the tip of the head cap rides on the surface of the instrument to be imprinted.

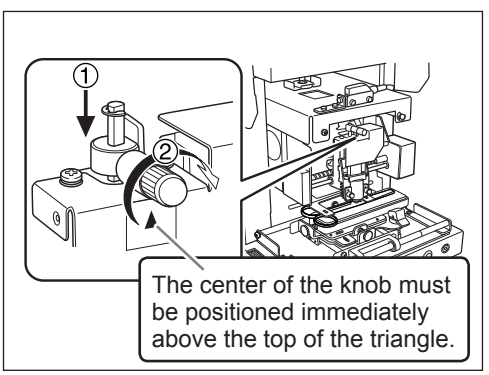


❷ **Loosen the head's stopper.**

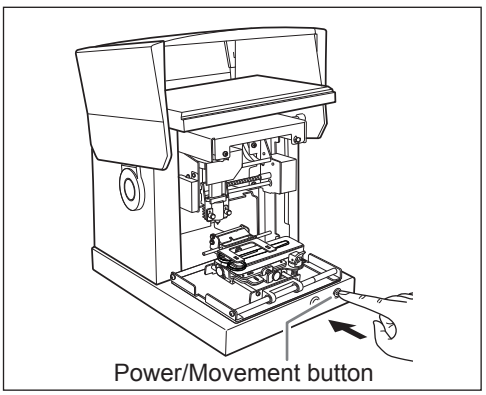


❸ **① Lower the stopper to the bottom.**
② Fix the stopper.

Align the center of the knob with the top of the triangle right below.

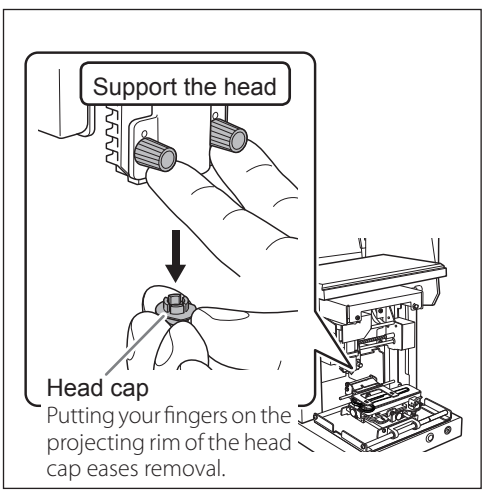


❹



Press the Power/Movement button.
The head moves to the left rear.

❺



Detach the head cap.

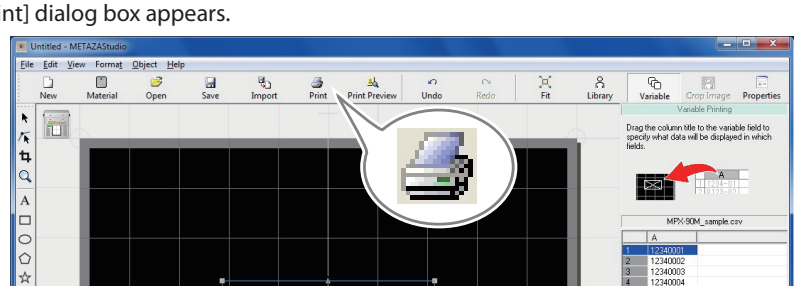
STEP 2: Making Prints

After you complete "Preparing for Printing" and "Loading Instrument to be Imprinted," printing starts.

☞ P. 26, "2-1 Preparing for Printing," p. 35, "STEP 1: Loading the Instrument to be Imprinted"

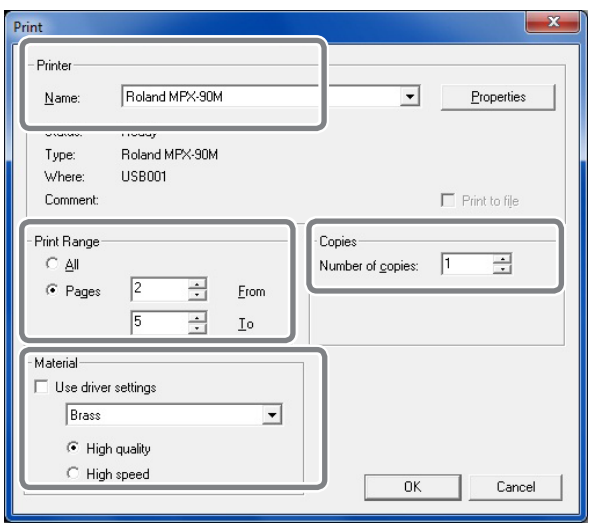
Procedure

❶ **Click** **.**
The [Print] dialog box appears.


Untitled - METAZAStudio
File Edit View Format Object Help
New Material Open Save Import Print Print Preview Undo Redo Fit Library Variable Crop Image Properties
Variable Printing
Drag the column title to the variable field to specify what data will be displayed in which fields.
MPX-90M_sample.csv
A
1 12340001
2 12340002
3 12340003
4 12340004

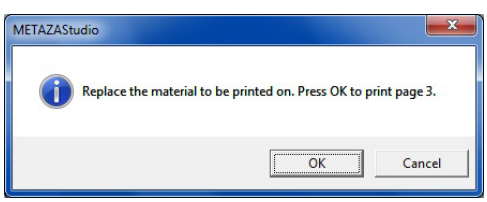
❷ Set and confirm the preferences below.

Printer name	Roland MPX-90M
Printing range	To restrict records (individual data included in a set of data used in Variable Printing) to be printed, specify the record (page) that you wish to print. For example, if you print the records of 2nd to 5th only, select [Pages] and specify the "2nd" to "5th" pages.
Copies	If you imprint the same instrument at multiple locations, specify multiple number of copies. For example, if you wish to print on the front and back sides of the instrument, specify "2" as the number of copies.
Material	Select the material of the instrument to be imprinted and specify your priority on printing quality (priority of quality or speed). The selection you make when you create new print data is reflected in the material setting. You can change the setting to print. The setting here takes priority over the setting in the METAZA driver.



❸ Click [OK].

Printing starts.



When you print multiple pages or multiple copies, the message shown in the figure appears after printing starts.
Wait until printing is finished, and then go on to the next step.

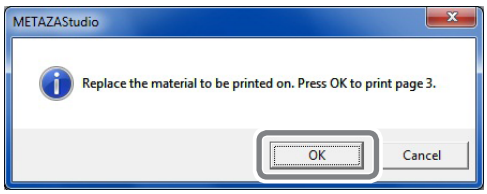
❹ When printing is finished, replace the instrument (material) to be printed or change its orientation.

☞ P. 35, "STEP 1: Loading the Instrument to be Imprinted"

POINT!

Make sure to align the position using the laser pointer button.

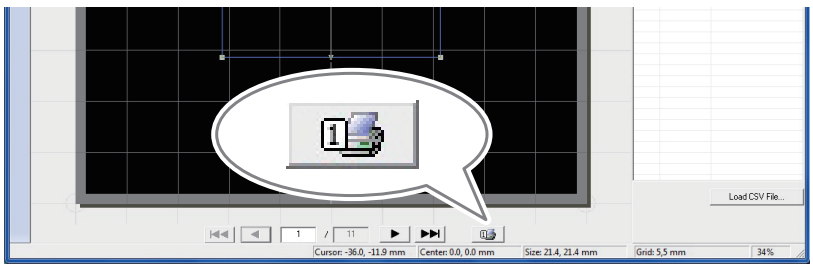
❺



Click [OK].
Printing of the next page starts.

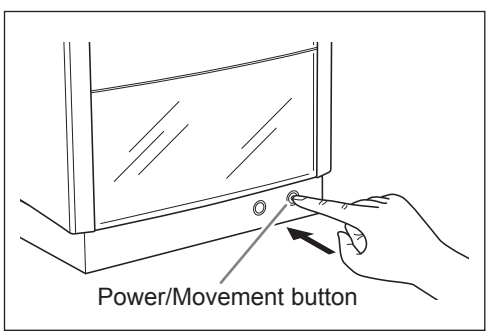
* Depending on the type of your scanner, it may be unable to read the 2D symbol imprinted by the machine, because it is unsuitable for the 2D symbol. For information on scanners suitable for the machine, consult your authorized Roland DG Corp. dealer or us.

When you wish to print only the record being displayed:



Click **.**
The [Print] dialog box appears.
The number (page number) of the record being displayed in METAZAStudio is specified as the page for [Print Range]. Specify [Material] and [Copies] as necessary and click [OK] to start printing.

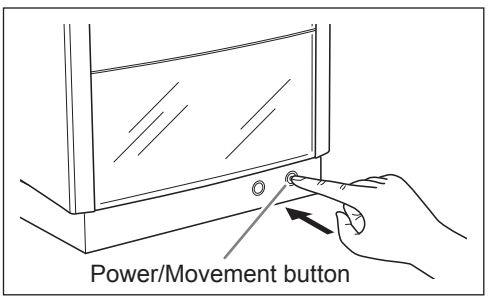
STEP 3: Finishing Printing (Switching Off the Power)



Hold down the Power/Movement button for one second or longer.
The light goes dark and the power is switched off.

2-3 Finishing and Stopping Printing Operations

Stopping Printing Operations



Hold down the Power/Movement button for one second or longer.
The light slowly blinks while the transmitted print data is being deleted. The light goes dark and the power is switched off.

Deleting Data from Print Queue

Procedure

❶ Windows 7

From [start] menu (), click [Control Panel] → [Hardware and Sound] → [Devices and Printers].

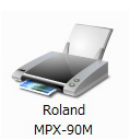
Windows Vista

From [start] menu (), click [Control Panel] → [Hardware and Sound] → [Printers].

Windows XP

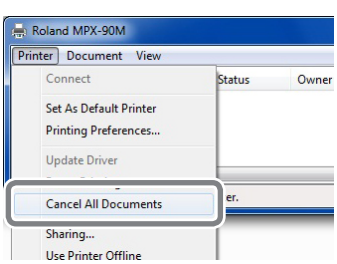
From [start] menu (), click [Control Panel] → [Printers and Other Hardware] → [Printers and Faxes].

❷



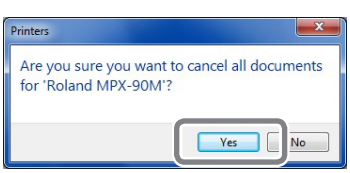
Double-click the [Roland MPX-90M] icon.

❸



At the [Printer] menu, click [Cancel All Documents] (or [Purge Print Documents]).

❹



If the message shown in the figure appears, click "Yes."

Chapter 3 Maintenance and Adjustment

3-1 Maintenance and Adjustment 48
Points to Note on Daily Care 48
Cleaning the Body/Vise/Table.....48
Cleaning the Adhesive Sheet 48
Cleaning of the Head Cap 48
3-2 Adjustment.....49
Adjusting the Striking Force of the Pin 49
Adjustment of Origin Point.....50
3-3 The Replacement of the Consumable Parts.....51
The Replacement Cycle for the Head Cap.....51
Head Replacement.....52

3-1 Maintenance and Adjustment

Points to Note on Daily Care

⚠WARNING **Never use gasoline, alcohol, thinner, or any other flammable material.**
Doing so may cause fire.

⚠CAUTION **Never touch the heads immediately after printing has finished.**
Doing so may cause burns.

- This machine is a precision device, and is sensitive to dust and dirt. Be sure to carry out day-to-day cleaning.
- Never use solvents such as thinner, benzine, or alcohol.
- Never attempt to oil or lubricate the machine.
- Never apply silicone substances (oil, grease, spray, etc.) to the machine. Doing so may cause poor switch contact.

Cleaning the Body/Vise/Table

Use a cloth moistened with water then wrung well, and wipe gently to clean.
The surface of the cover is easily scratched, so use a soft cloth.

Cleaning the Adhesive Sheet

Attaching dust or the like on the adhesive sheet can reduce the sheet's adhesive force, making it difficult to secure an instrument to be imprinted in place. If the adhesive force has been reduced, then wash the adhesive sheet.

How to Wash

Immerse the adhesive sheet in water, and wash the sheet by gently stroking its surface. If the soiling of the adhesive sheet is severe, wash it using diluted neutral detergent. Rinse thoroughly with water to remove all detergent completely.

Be sure to comply with the following instructions.
If not, the surface of the adhesive sheet is damaged, lowering the adhesiveness.

- Never scrub the adhesive sheet using a scrubbing pad or sponge.
- Never stretch or bend the adhesive sheet when washing it.

How to DRY

Allow to dry completely, out of direct sunlight.

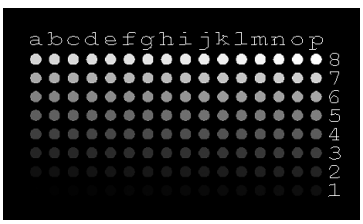
Cleaning of the Head Cap

Detach the head cap from the machine and remove dirt and dust from the surface and the inside of the head cap. Printing without removing dirt and dust from the head cap may damage instruments to be imprinted and/or affect the print quality.

3-2 Adjustment

Adjusting the Striking Force of the Pin

You can adjust the striking force of the pin by using MPX-90M Head Manager. Pin adjustment involves striking the pattern shown in the figure. Prepare a piece of test-use printing material (brass) or other material measuring about 60 mm (2.3 in.) by 60 mm (2.3 in.).



Adjustment pattern

Procedure

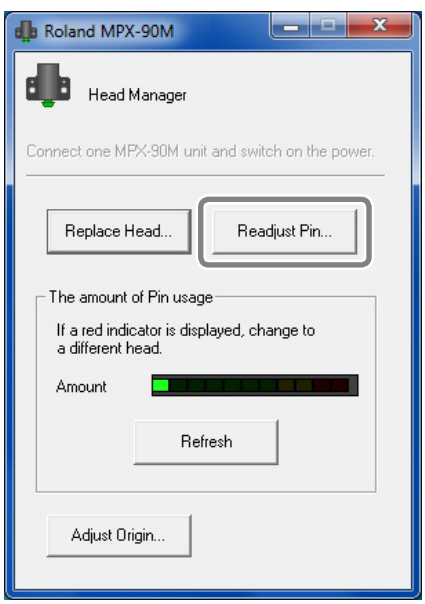
1 Start MPX-90M Head Manager.

☞ P. 22, "How to Start The Software"

2 Switch on the power to the machine.

☞ P. 27, "STEP1: Switching On the Power"

3



Click [Readjust Pin].

Follow the on-screen instructions to perform adjustment for the pin.

➢ Set a material to be imprinted with a test pattern using the adhesive sheet and table.

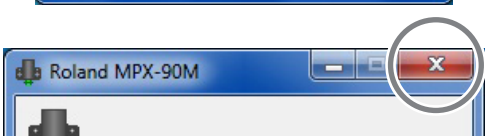
➢ Use a head cap.

☞ P. 35, "STEP 1: Loading the Instrument to be Imprinted"

If the adjustment pattern fails to be printed, see the sections given below.

☞ P. 67, "The printed location isn't where desired"

4



When you have finished, click **.**

The window closes.

Adjustment of Origin Point

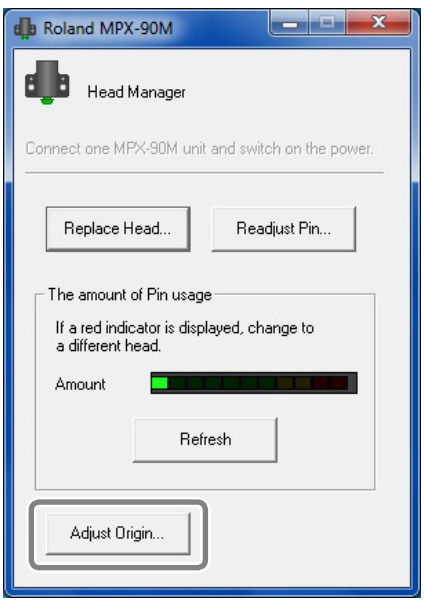
If printed text or image is placed at a position that does not coincide with the desired position, the origin point of the machine is displaced. Adjust the origin point using the method described below.

Procedure

1 **Start MPX-90M Head Manager.**

☞ P. 22, "How to Start The Software"

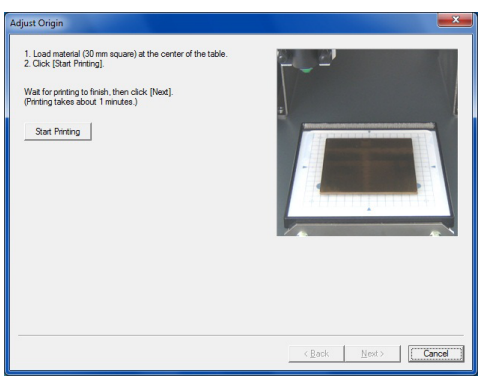
2



MPX-90M Head Manager

Click [Adjust Origin].

The [Adjust Origin] wizard appears.


Adjust Origin
1. Load material (30 mm square) at the center of the table.
2. Click [Start Printing].
Wait for printing to finish, then click [Next].
(Printing takes about 1 minutes.)
Start Printing
< Back
Next >
Cancel

[Adjust Origin] wizard

Follow the on-screen instructions to perform adjustment.

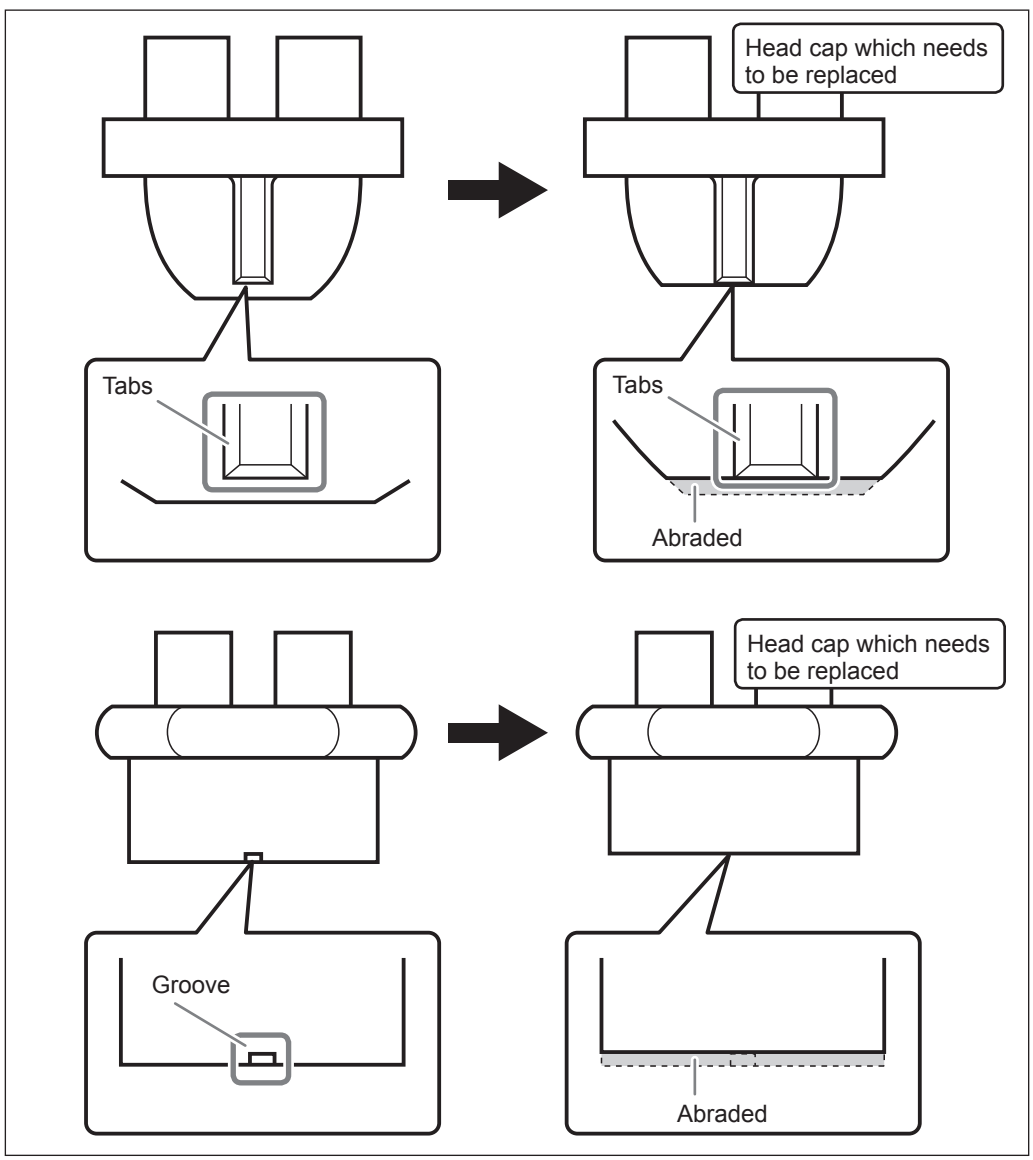
3-3 The Replacement of the Consumable Parts

The Replacement Cycle for the Head Cap

When the head cap becomes worn away as shown in the figure below, it is time for replacement. Replace the head cap with a new one appropriately.
The degree of wear may vary according to printing conditions. In particular, printing that makes extensive use of island fill and other line-drawing operations on materials such as aluminum results in especially rapid wear because of the extensive unevenness on the surface of the instrument to be imprinted. Periodically check the state of the head cap to ensure that it is replaced as often as needed.

* "Island fill" is a method of printing characters and objects (without filling objects) using lines placed at intervals. For details, refer to the help for METAZAStudio ("Commands"-"[Format] menu"-"Font"-"[Properties] dialog box").

☞ P. 35, "STEP 1: Loading the Instrument to be Imprinted"



Head Replacement

In the following cases, the head needs replacement.

- The head reaches the end of its life.
- The marking pin is worn out.

A General Guide of Head Life

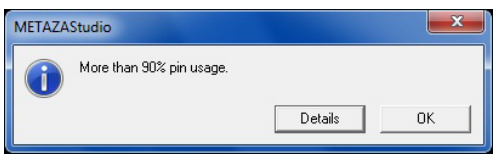
About 4,000 plates can be printed under the following conditions.

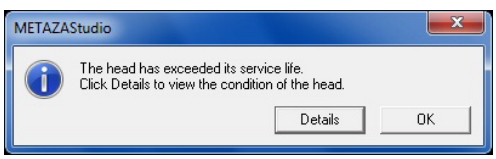
Material used : MD-NI (Roland nickel-plated plate)
Printing area : 30 mm (1.1 in.) X 23 mm (0.9 in.)
Print Mode : Photo
Printing rate : 35% (25,000 dots per plate)

In the case of 2D symbol

About 60,000 to 100,000 symbols of 3 mm x 3 mm (H x W) size can be printed
* It depends on the setting of METAZAStudio.

A message that indicates the head life also appears on METAZAStudio.





Click [OK], and the message disappears. Click [Details], and MPX-90M Head Manager appears.

☞ P. 52 "How to check the state of the marking pin"

How to check the state of the marking pin

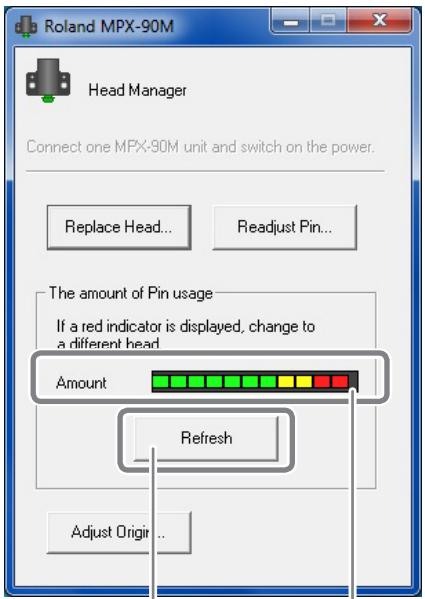
You can check the state of the marking pin using MPX-90M Head Manager.

Procedure

1 Start MPX-90M Head Manager.

☞ P. 22, "How to Start The Software"

❷



This refreshes the screen to display the latest information.

The amount of pin usage is indicated in this window. The level indicator increases little by little as the pin is used to strike the material. The rate of increase varies depending on the material used for printing.

Switch on the power to the machine.

☞ P. 27, "STEP1: Switching On the Power"

The indicator for [The amount of Pin usage] in MPX-90M Head Manager shows how much the marking pin has been used. The following cases need head replacement.

- **The indicator is shown in red.**
- **Though the indicator is not shown in red, attractive printing is unavailable or images are uneven.**

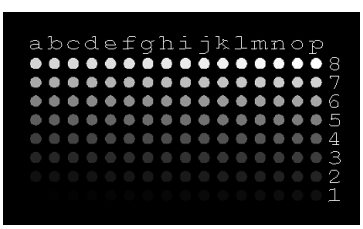
The worn-out of marking pin is not the only reason for decrease of print quality and uneven print results. Refer to the pages below to find the cause of the problem. If the worn-out of marking pin can be the cause of the problem, replace the head with a new one.

☞ P. 69, "The printed image is unattractive," p. 69, "The image is uneven"

How to Replace the Head

MPX-90M Head Manager is used for the head replacement operation. The pattern shown in the figure is struck during the head replacement operation. You need to prepare a test print material (brass), which is supplied with a replacement head (MPH-90), or a material equal to or larger than 60 mm (2.3 in.) x 60 mm (2.3 in.).

Note : A replacement head is sold separately. Consult your authorized Roland DG Corp. dealer.



Adjustment pattern

Important

- **Do not stop the replacement operation halfway.**
- **Do not use the head of which the marking pin is worn out.**
- **Do not use the head which is detached from the machine.**

Procedure

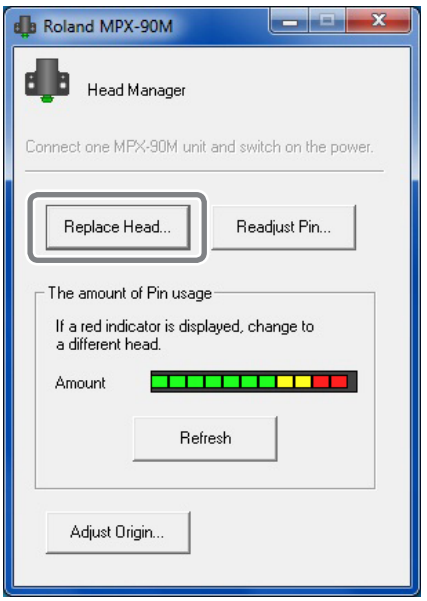
❶ **Start MPX-90M Head Manager.**

☞ P. 22, "How to Start The Software"

❷ **Switch on the power to the machine.**

☞ P. 27, "STEP1: Switching On the Power"

❸



Click [Replace Head].

Follow the on-screen instructions to perform adjustment for the pin.

➢ Set a material to be imprinted with a test pattern using the adhesive sheet and table.

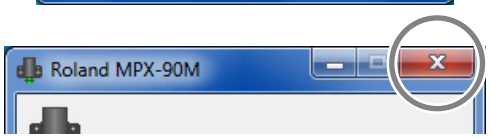
➢ Use a head cap.

☞ P. 35, "STEP 1: Loading the Instrument to be Imprinted"

If the adjustment pattern fails to be printed, see the sections given below.

☞ P. 67, "The printed location isn't where desired"

❹



When you have finished, click **.**

The window closes.

Chapter 4
Appendix

4-1 More Advanced Operations 56
Directly Creating 2D Symbol 56
Registering a Composition and Adjusting the Striking Force.....59
Changing Basic Settings of METAZA Driver.....60
Creating and Editing Line Text.....61
Other operations available with METAZAStuido.....65
4-2 What to Do If.....66
The [Power/Movement] button is blinking. 66
The machine doesn't run even when printing data is sent. 67
The printed location isn't where desired 67
You cannot select the material of the object to be imprinted using METAZAStudio. 68
The printed image is unattractive. 69
The image is uneven. 69
The image is always faint at the same location. 70
To install METAZA driver separately.....72
To Install Software Separately.....76
The METAZA Driver Cannot Be Installed 77
Uninstalling the METAZA driver.....78
4-3 When Moving the Machine 80
Attaching retainers.....80
4-4 Main Unit Specifications 82
Printable Area 82
Location of Power Rating and Serial Number Label.....83
Specifications 84
System Requirements for USB Connection 84

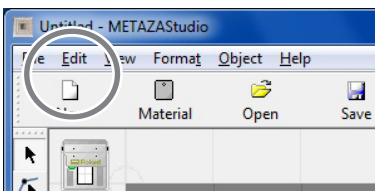
Directly Creating 2D Symbol

You can create 2D symbol not only from a CSV file but also directly from METAZAStudio.
Based on a 2D symbol you create, you can edit the code using METAZAStudio and create another 2D symbol.

Procedure

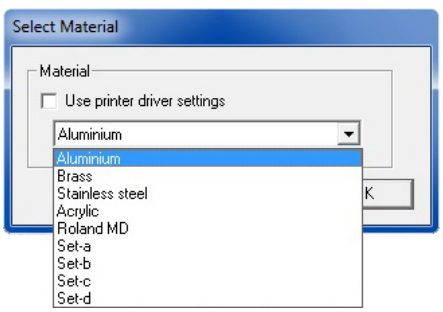
1 Start METAZAStudio.

☞ P. 22, "How to Start The Software"



If METAZAStudio is running, click .

2

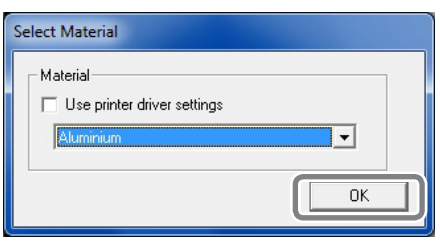


In the [Select Material] dialog box, select the material of the instrument to be imprinted.
Uncheck the [Use printer driver settings] checkbox to select a type of material. To use material that is not included in the list, you can register the material.

☞ P. 59, "Registering a Composition and Adjusting the Striking Force"

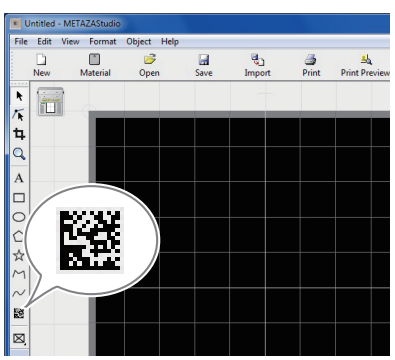
If you use the driver settings without changing them, check the [Use printer driver settings] checkbox.

3



Click [OK].

4

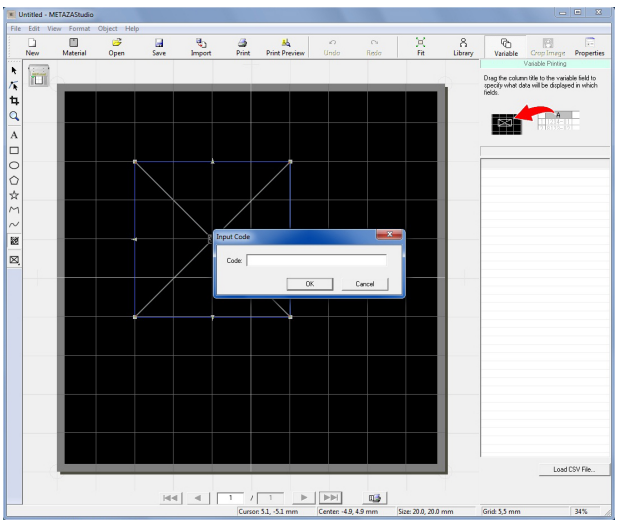


Click .

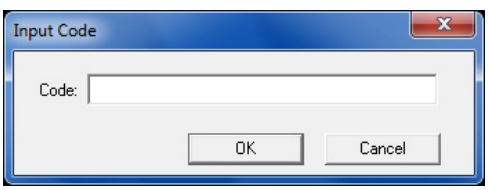
5 Drag the mouse (move while holding down the left button of the mouse) diagonally downward on the work area* in METAZAStudio.

The drawing area for a 2D symbol is created and the [Code Input] dialog box appears.

* Work area = black area on the screen



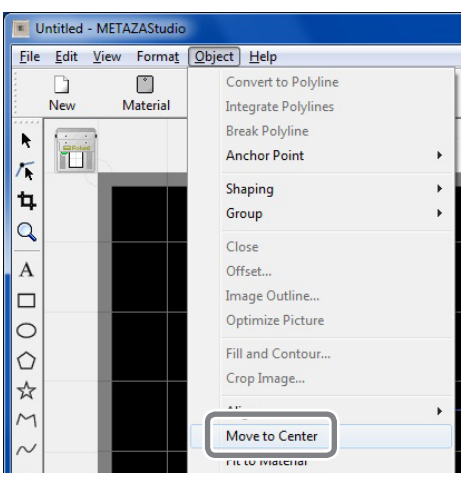
6



Enter a code and click [OK].

Enter a code for the 2D symbol.

7



Click [Object] > [Move to Center].

The center of the 2D symbol moves to the center of the work area.

IMPORTANT!

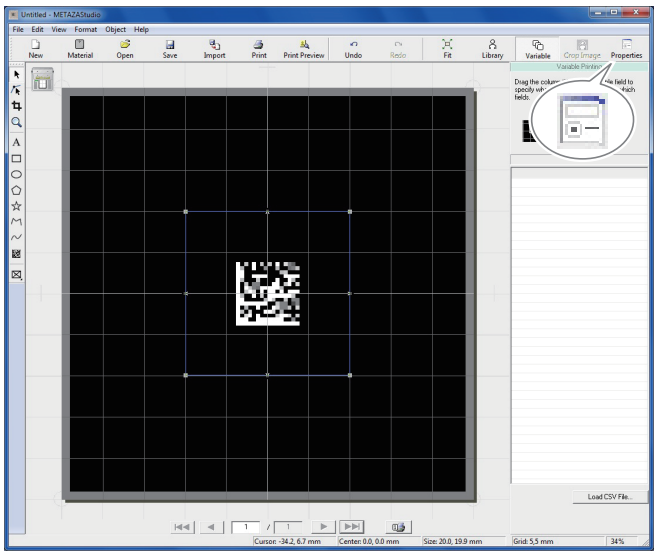
This work is important, being related to the actual printing position.

In the machine, the center in printing operation is defined as the reference point in printing operation. The "center of the work area" in METAZAStudio coincides with the reference point in printing operation. Consequently, making the "center of the 2D symbol" coincide with the "center of the work area" means making the "center of the 2D symbol" coincide with the "reference point in actual printing operation."

Though you can print without making the "center of the 2D symbol" coincide with the "reference point in printing operation," making these points coincide with each other ensures the ease of placing printed text and image at the desired location.

8 **Click .**

The [Properties] dialog box appears.



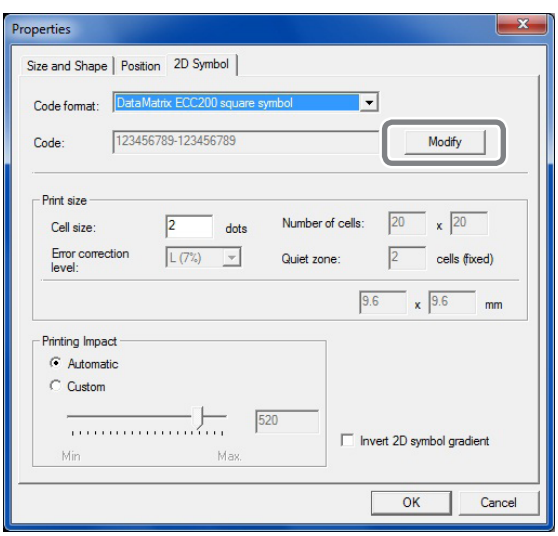
If the drawing area for the 2D symbol is not selected, you cannot click . If you cannot click , click and then click (select) the drawing area for the 2D symbol.

9 **Make the settings for properties including [Size] of the 2D symbol.**

For details on each setting, refer to the help for METAZAStudio ([Commands] - [Object] menu - [Properties] - [Properties] dialog box).

☞ P.23, "How to display help for software"

After making the settings, click [OK].



POINT!

If you click [Change] in the [2D Symbol] tab, the [Code Input] dialog box appears. Using the [2D Symbol] file you create directly in METAZAStudio, you can create a file with a different code.

Now the print data is prepared. Go to "STEP 1: Loading the instrument to be imprinted" in P. 35.

Registering a Composition and Adjusting the Striking Force

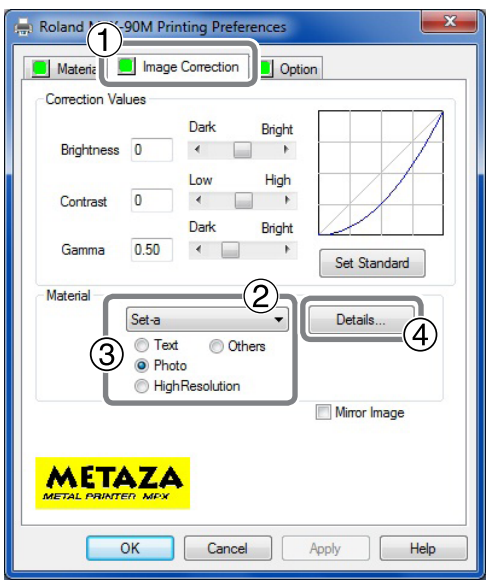
With the machine, performing printing using a striking force appropriate to the material of the instrument to be imprinted can obtain printing results of even higher quality. The METAZA driver for the machine has premade settings for a number of materials and their appropriate striking forces, but you can also register materials and their optimal striking forces yourself. You can also carry out later adjustment of the striking force of materials you've registered yourself, in order to obtain better printing results.

Procedure

❶ Display the METAZA driver's Printing Preferences screen.

☞ P. 21, "How to Open the METAZA Driver's Printing Preferences Screen"

❷



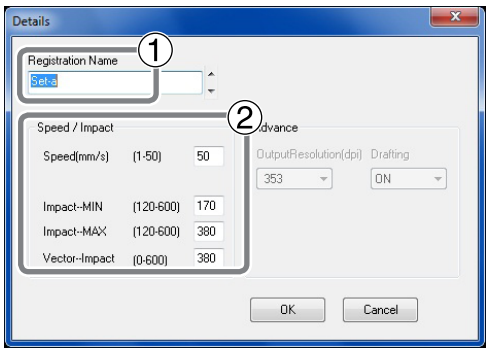
① Click [Image Correction] tab.
② For [Material], select a custom material (settings a through).
③ Select print Mode.

Text	When you want to print text and other images with clear outlines
Photo	When you want to print photographs and other images with gradation
HighResolution	When you want to express small text and small patterns clearly
Others	When you want to make the resolution setting and other settings of an image

☞ METAZA Driver online help ([Correction] tab)

④ Click [Details].
The [Details] dialog appears.

❸



① Enter a name for the composition you're registering.

② Enter [Speed/Impact]

The printing results vary according to the hardness of the material. Adjust to match the material.

☞ METAZA Driver online help ("[Correction] tab" > "[Details] dialog box")

Impact--MIN	You can set the minimum value of print impact for an image. Raise the value when dark areas of the image are not struck. Lower the value when dark areas of the image are whitish or when overall striking is too forceful.
Impact--MAX	You can set the maximum value of print impact for an image. Raise the value when bright areas of the image are struck with too little force or when overall striking is too weak. Lower the value when bright areas of the image are struck with too much force.
Vector Impact	You can set the maximum value of print impact for a line.

③ Select [Advance].

[Advance] is available only when [Other] is selected in ③ in step ❷.

☞ METAZA Driver online help ("[Correction] tab" > "[Details] dialog box")

OutputResolution	You can specify the number of dots per inch. As the number of the points becomes larger, the image will become more precise.
Drafting	If you select "ON", you can skip image information in increments of one dot.

④ Click [OK].

[Advance] dialogue close.

Changing Basic Settings of METAZA Driver

Procedure

❶ Windows 7

From [Start] menu ( ), click [Control Panel] → [Hardware and Sound] → [Devices and Printers].

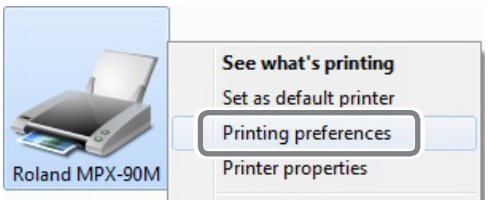
Windows Vista

From [Start] menu ( ), click [Control Panel] → [Hardware and Sound] → [Printers].

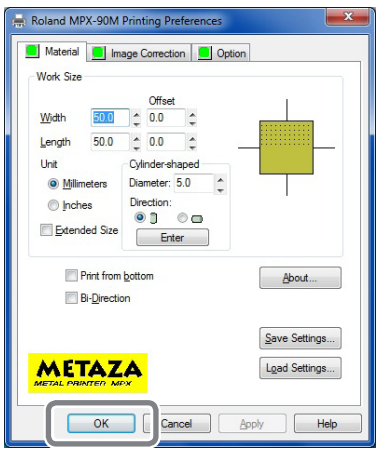
Windows XP

From [Start] menu , click [Control Panel] → [Printers and Other Hardware] → [Printers and Faxes].

❷



① Right-click the [Roland MPX-90M] icon,
② Click [Printing Preferences].
The setting window for METAZA Driver appears. Change the settings to suit your needs.



③ After completing the setting, click [OK].

Description

METAZA Driver allows you to make the basic settings for a variety of items including the size of material and the unit used for display. The basic settings continue to be applied by making the settings with the method described above.
Though you can change these settings from METAZAStudio (From [File] menu, click [Print Setup] → [Properties] to display [Printing Preferences] shown in step ③, any changes you make disappear when you restart METAZAStudio.

Creating and Editing Line Text

About Stroke characters and SFEdit2

What is stroke characters?

All stroke characters are made up of polylines and lines.

What is SFEdit2?

SFEdit2 is a program for creating and editing stroke character fonts. As all stroke characters are made up of polylines and lines, you can add or delete anchor points and add line segments. On METAZAStudio, you can use the stroke character fonts that are created and edited by SFEdit2.

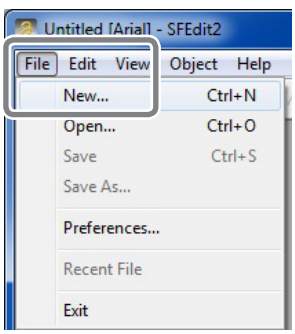
Creating and saving stroke character fonts

Procedure

❶ Start SFEdit2.

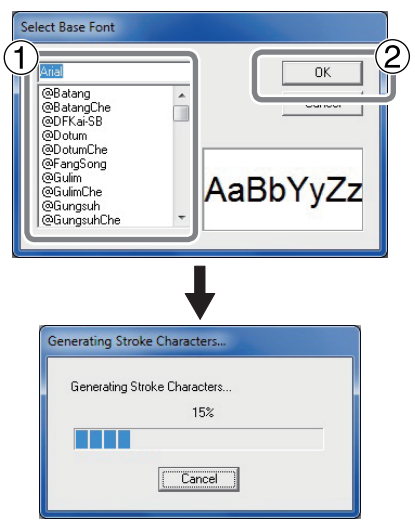
☞ P.23, “How to Display Help for Software“

❷



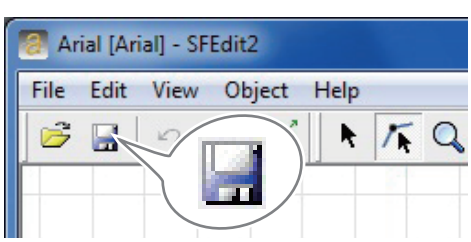
Click [File] → [New…].
[Select Base Font] dialog box appears.

❸



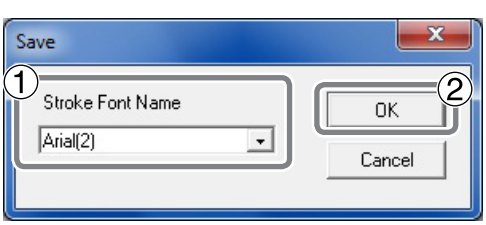
① Select a font which is used as a base of a stroke character font to be created.
② Click [OK].
A stroke character font is automatically created.

❹

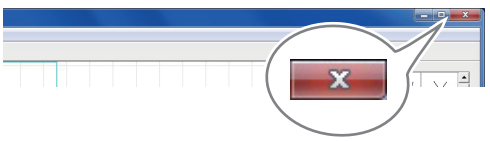


Click **.**
[Save] dialog box appears.

❺



① Enter the "name of the created stroke character. "
Giving a name based on the base font name allows you to easily identify the new name at a later time. For example, "MS P Gothic_SF" is entered.
② Click [OK].
The created stroke character font is saved.

❻  Click .

Using a stroke character font in METAZAStudio

Make sure that either of the following operations are completed in advance.

➢ **Create a stroke character font before SFEdit2 is installed.**

The window shown in the figure appears when you install it. If you did not create a stroke character font at the time of installation, reinstall SFEdit2 and create a stroke character font.

☞ P. 18, "Installing the Driver and the Software," p. 76, "To Install Software Separately"

➢ **Create a new stroke character font.**

☞ P. 62, "Creating and saving a stroke character fonts"

1. Change entered characters into stroke characters in a stroke character font.

❶ **Enter characters in METAZAStudio.**

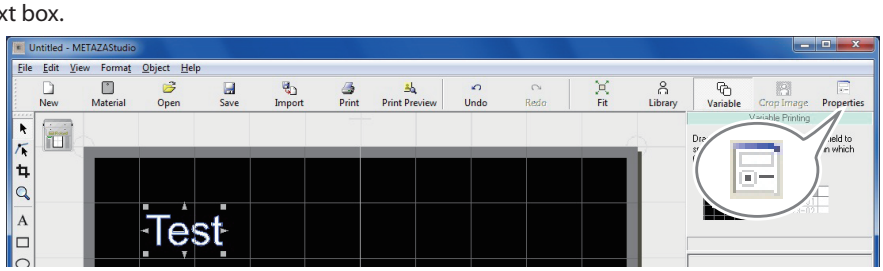
For the method of entering characters, see Help of METAZAStudio.

☞ P.23, “How to Display Help for Software“

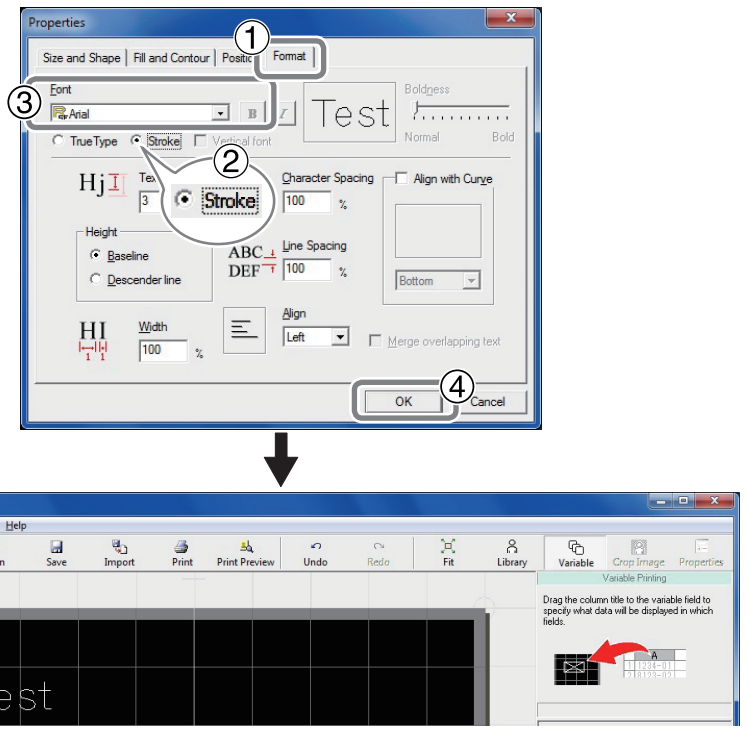
❷ **Click** **.**

The [Properties] dialog box appears.

If the text box containing the entered characters is not selected, you cannot select . Be sure to select the text box.

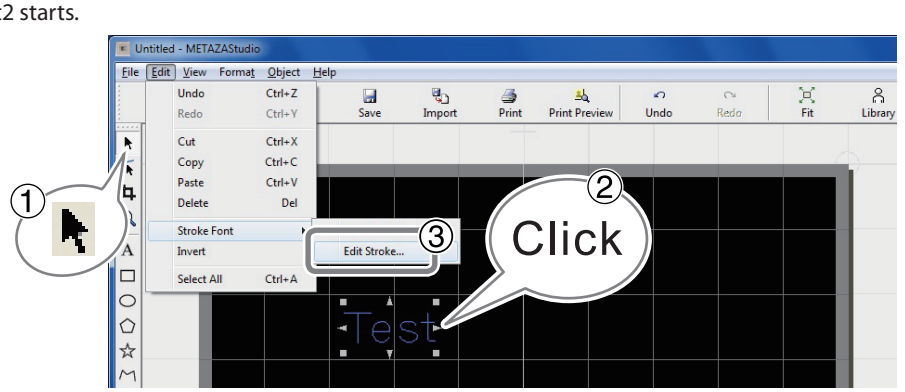


❸ **① Clikck [Format] tab.**
② Select [RSF].
The option of [Font] becomes Stroke character only.
③ Select Stroke character.
④ Click [OK].
Entered characters are changed into stroke characters. The stroke character font selected in ③ is used for the stroke characters.



2. Editing Stroke character

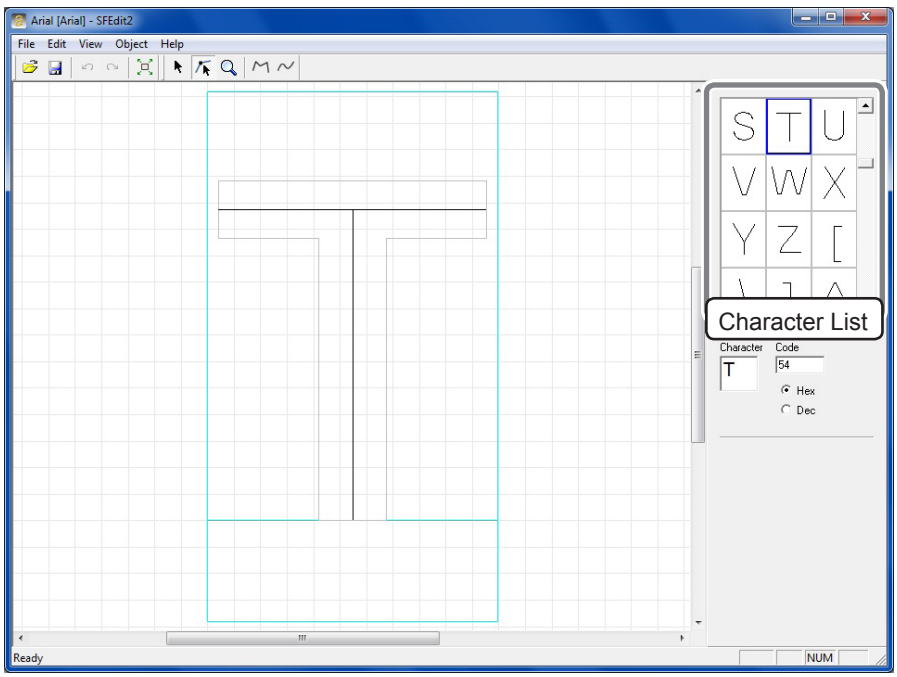
❶ **① Click** .
② Click the stroke character you want to edit.
Eight pointers appear around the stroke character.
③ Click [Edit] → [Stroke Font] → [Edit Stroke…].
SFEdit2 starts.



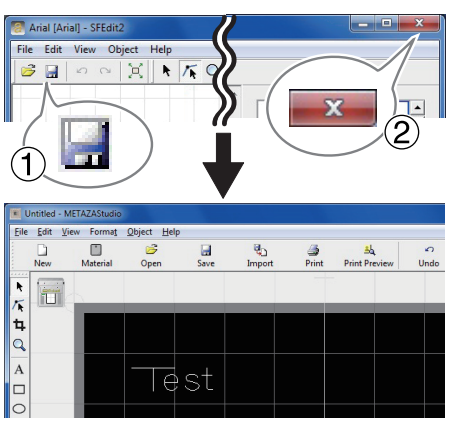
❷ **From Character List, click stroke character you want to edit.**

The stroke character you want to edit is displayed in the virtual body and the stroke character becomes editable. Change the position and shape of the stroke character.

☞ Help for SFEdit2 (Editing Polylines)



❸



① **Click** **.**

The edit is overwritten to the selected stroke character font.

② **Click** **.**

SFEdit2 is finished.

The edit is reflected to the stroke character.

Other operations available with METAZAStuido

What METAZAStudio offers is not just creation of 2D symbol and text data. For example, further functions like the below are also available.

- Registration of material shape
- Creation and edit of desired characters and shapes
- Import of image files

For information on the operation method, refer to the online help for METAZAStudio.

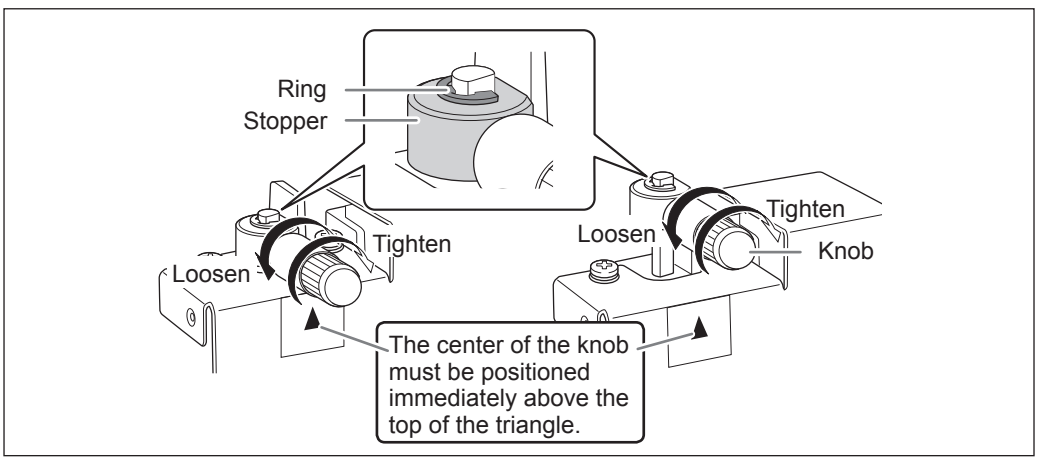
☞ P.23, “How to Display Help for Software“

4-2 What to Do If

The [Power/Movement] button is blinking.

Do you switch on the power as the height of the head position is fixed?

As the power is switched on while the height of the head position is fixed, the initial operation is stopped. If the machine continues the initial operation while the instrument to be imprinted is loaded, the instrument's surface may be scratched and/or the marking pin may be damaged.
Loosen the knob counterclockwise once. Then, while pushing the head's stopper against the ring, tighten the knob. Press the [Power/Movement] button, and the initial operation is completed and the lamp stops blinking and lights up.



When you do not use the head cap, do you forget to adjust the height of the head position?

The tip of the head hits the surface of the instrument to be imprinted. Switch off the power by holding down the [Power/Movement] button for one second or longer.
In the case that you perform printing without using the head cap, adjust the head position to an appropriate position based on the surface height of the material (instrument to be imprinted) and secure the head firmly with the knob. If the head is fixed at the position that is lower than the surface height of the instrument to be imprinted, the tip of the head hits the surface of the instrument.

☞ P. 35, "STEP 1: Loading the Instrument to be Imprinted"

Do you lift the head when you turn ON the power?

Since the head is lifted to the topmost, the machine considers that the surface height of the instrument to be imprinted does not meet the requirements for carrying out printing operation. Switch off the power by holding down the [Power/Movement] button for one second or longer.
When switching on the power, be careful not to touch the head unnecessarily.

Is a change in the height of the print surface too large?

Switch off the power by holding down the [Power/Movement] button for one second or longer.
Check the requirements for the instruments that can be imprinted and select the instrument that meets the requirements.

☞ P. 28, "STEP 3: Preparing Instrument to be Imprinted"

Do you set an instrument to be imprinted without using the supplied vise or the table?

Switch off the power by holding down the [Power/Movement] button for one second or longer.
If you set an instrument of which surface height is low without using the supplied table or the vise, the machine considers that the surface height of the instrument does not meet the requirement for carrying out printing operation. Make sure to set an instrument using the supplied vise or the table.

☞ P. 35, "STEP 1: Loading the Instrument to be Imprinted"

Is the knob loosened?

Switch off the power by holding down the [Power/Movement] button for one second or longer.
If the knob becomes loose during printing in the case that the head cap is not used, the head position does not match the surface height of the instrument. When you set the head position, make sure to tighten the knob firmly.

☞ P. 35, "STEP 1: Loading the Instrument to be Imprinted"

The machine doesn't run even when printing data is sent.

Is the power switched on?

Make sure the Power/Movement button light is on. If it is dark, press the Power/Movement button to switch on the power.

☞ P.27, "Switching On the Power"

Is the power cord connected correctly?

If it is not connected correctly, connect it properly.

☞ P. 16, "Power Cord Connection"

Is the cable used for the connection to the computer connected correctly?

Check if the connection cable is disconnected.

The printed location isn't where desired

Is the instrument to be imprinted loaded at the correct location?

If striking is performed at a location other than where the instrument is loaded, then reload the instrument.

☞ P. 35, "STEP 1: Loading the Instrument to be Imprinted"

Is the origin point of the machine displaced?

If the origin point is displaced, you cannot place printed text or image at the desired position. Using MPX-90M Head Manager, adjust the origin point.

☞ P. 50, "Adjustment of Origin Point"

Striking is performed, but nothing is printed.

Does the instrument to be imprinted meet the requirements for instruments that can be imprinted? Prepare and use an instrument that can be imprinted.

☞ P. 28, "STEP 3: Preparing Instrument to be Imprinted"

If you're not using a head cap, does the head position match the surface height of the instrument to be imprinted?

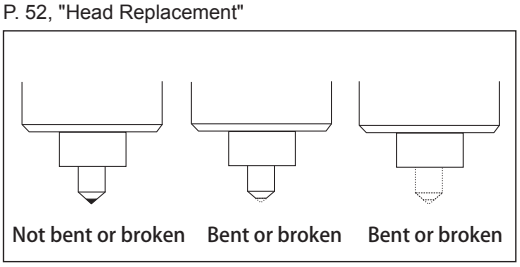
Check if the head position matches the surface height of the instrument in the case that you do not use the head cap. Printing cannot be performed if the head position does not match the surface height of the instrument. Adjust the head position and then tighten the knob firmly.

☞ P. 35, "STEP 1: Loading the Instrument to be Imprinted"

Is the marking pin bent or broken?

When nothing is printed, and changing the location where the material is loaded, the parameters for the material, or the height of the head unit does not correct the problem, then the marking pin may be bent or broken. Try changing to an unused marking pin and carry out test printing. If you can print with the new marking pin, it means the marking pin you had been using is bent or broken. Continue using the new marking pin.

☞ P. 52, "Head Replacement"



You cannot select the material of the object to be imprinted using METAZAStudio.

Is the [Use printer driver settings] checkbox checked?

If the [Use printer driver settings] checkbox is checked in the [Select Material] dialog box, you cannot select a material. Uncheck the [Use printer driver settings] checkbox.

Do you use a file created by an old version of METAZAStudio?

You cannot select a material using a file created by METAZAStudio of which version is earlier than 2.00. Save the file using METAZAStudio of which version is 2.00 or later, and select a material.
You can check the version of your METAZAStudio on the window displayed by clicking the [Help] menu → [Version] in METAZAStudio.

The printed image is unattractive.

Are the settings for the material correct?

Choose the material of the loaded instrument in METAZAStudio.
Even if the composition of the material is the same, the hardness of the printed surface may vary greatly depending on the casting method, the composition of impurities, the presence of plating, and so on. In such cases, fine adjustment of the striking force is necessary.

☞ P. 59, "Registering a Composition and Adjusting the Striking Force"

Is the image printed blurry?

If the image is not printed clearly, adjust the brightness of the image.
Make a print while increasing the value of [Gamma] or [Brightness] in the preview window a little at a time. At this time, leave the instrument to be imprinted loaded and perform overstriking at the same location. While changing settings, continue to print until you obtain the condition you want.

☞ METAZAStudio online help>“Commands” >[File] menu> Print Preview

Are grayscale tones printed clearly?

When grayscale tones are indistinct, go to the setting window for the METAZA driver ([Details] at the [Image Correction] tab) and adjust the force of striking. Perform printing while leaving the value for [Impact--MAX] unchanged and increasing the value for [Impact--MIN] a little at a time. At this time, leave the instrument to be imprinted loaded and perform overstriking at the same location. While changing the settings in the METAZA driver's setting window, continue to print until you obtain the darkness you want.

☞ P. 59, "Registering a Composition and Adjusting the Striking Force"

> About printing results caused by overstriking and final setting values
> Overstriking is a method where you can obtain desired printing results by repeatedly striking the same location while changing the setting a little at a time. Therefore, although you print on a new material only once using the final setting value applied when performing overstrike, you cannot obtain the same printing result as the one you obtain when performing overstrike.

Is the marking pin worn?

Attractive printing may be impossible if the marking pin becomes worn. Adjust the pin or change it to a new one.

☞ P. 52, "Head Replacement"

The image is uneven.

Is the printed surface slightly uneven?/Is the printed surface at an angle?

Attach a head cap and perform printing. If you’re using material that can be damaged by printing with the head cap attached, replace it with an instrument that has a level printing surface.

☞ P. 36, "Precautions for use of head cap"

Is the image darkness uneven?

Performing overstriking may improve the image quality. With the instrument left loaded, try performing overstriking with different settings for [Gamma], [Brightness], or [Contrast] in the preview window.

☞ METAZAStudio online help>“Commands” >[File] menu>Print Preview

Was bidirectional printing performed?

Bidirectional printing can shorten the printing time, but the image quality may suffer. If this happens, go to the driver's setting window and clear the selection for [Bidirection], then redo printing.

☞ METAZA Driver online help ([Material] tab)

Is the marking pin worn?

Attractive printing may be impossible if the marking pin becomes worn. Adjust the pin or change it to a new one.

☞ P. 52, "Head Replacement"

The image is always faint at the same location.

Is the height displacement for the printed surface excessive?

If the image is always faint at the same location even though you’re performing printing using a head cap, the height displacement for the printed surface may be excessive. Recheck the requirements for the instruments that can be imprinted by the machine and select the instrument that meets the requirements. Also, image quality is not assured when printing photographic data on a curved surface with this machine.

☞ P. 28, "STEP 3: Preparing Instrument to be Imprinted"

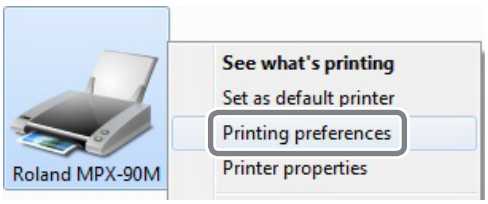
The machine may tilt slightly.

If the image is often faint at the same location, such as near the front right area of the table, the machine may tilt slightly. Adjusting the levelness of the machine may improve the image quality. Please note that this is not effective when unevenness in the image is unrelated to the printing location, such as when uneven areas vary from an instrument to be imprinted or image to another. We recommend using a head cap whenever such use is possible.

Procedure

1. **Load a piece of included test-use printing material on the table.**
   Using the adhesive sheet, set it at the center of the table. If the included material has been used up, then prepare a piece of material that is larger than 60 mm (2.3 in.) and has a smoothness of 0.05 mm (0.002 in.) or less. Make a print without using the head cap.
   ☞ P. 35, "STEP 1: Loading the Instrument to be Imprinted"
2. **Click [Devices and Printers] (or [Printers and Faxes]) from the Start menu ( ).**

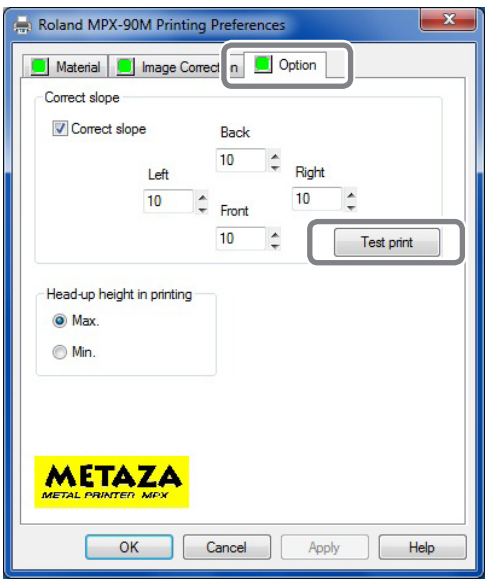
❸



Right-click the "Roland MPX-90M" icon, and then click Printing Preferences.

The METAZA driver's Printing Preferences screen opens.

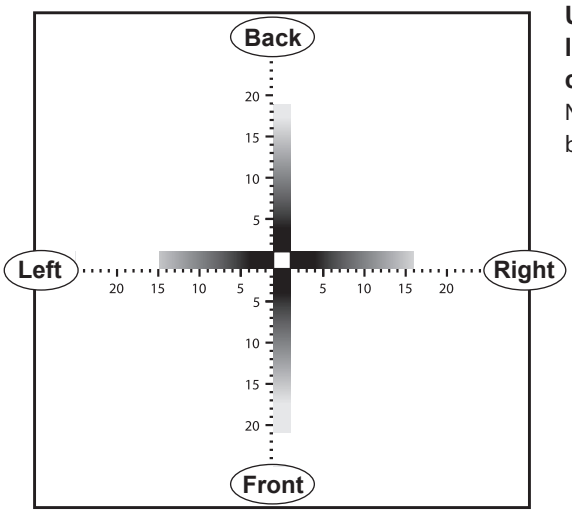
❹



Click [Test Print] in the [Option] tab.

The test pattern is printed on the material.

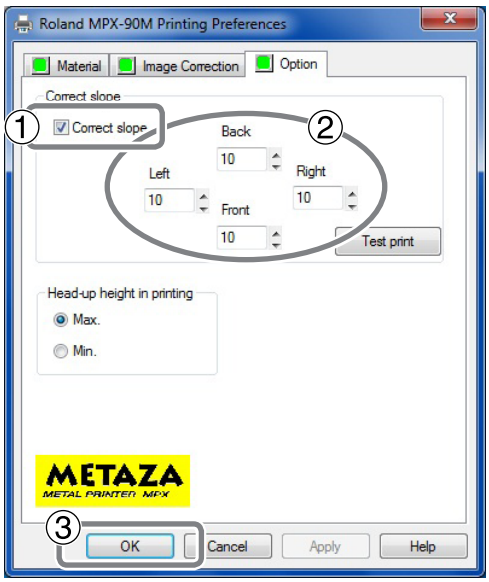
❺



Use the scale to read and note down locations where the test pattern is not continuous or not visible.

Note down the values in all four directions (front, back, left, and right).

❻



① Select [Correct slope]
② Enter the scale values you noted in ❺ into the driver.
③ Click [OK].

To install METAZA driver separately

You can install the driver and software at a time. For the method of installing them at a time, see P. 18, "Installing the Driver and the Software".

Procedure

❶ **Log on to Windows as an administrator or as a member of the Administrators group.**

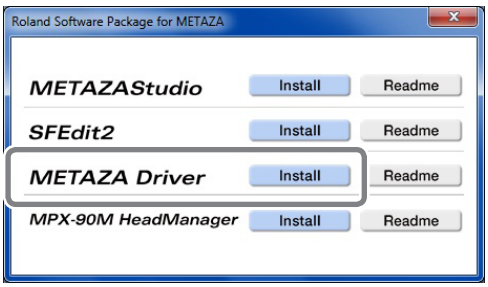
❷ **Insert the Roland Software Package CD-ROM into the computer.**
(Windows Vista/7 only: When the automatic playback window appears, click [Run menu.exe].)
The setup menu appears automatically.

❸ **Uninstall the METAZA driver if it has been already installed.**
☞ P. 78, "Uninstalling the METAZA driver"
Go to Step ❹ if the iModela driver is not installed or it is uninstalled.

❹

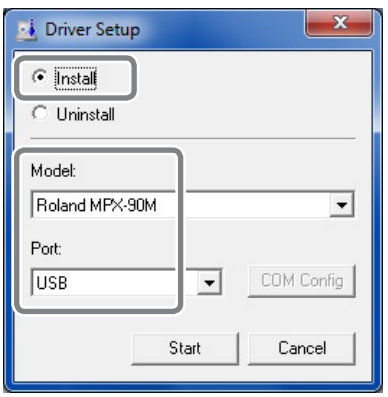
Click "Custom Install."

❺



Click [Install] of "METAZA Driver".

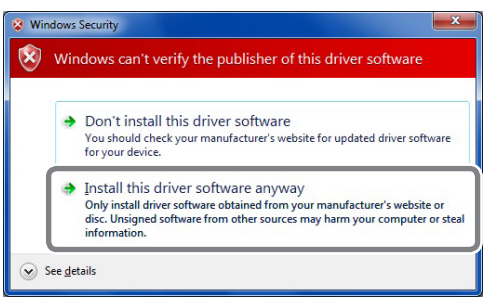
❻



Select [Install], select [Roland MPX-90M] as the model name, select [USB] as the port, and then click [Start]."

Driver installation starts. Follow the on-screen instructions and continue with the installation.

Windows Vista or 7


Windows Security
Windows can't verify the publisher of this driver software
Don't install this driver software
You should check your manufacturer's website for updated driver software for your device.
Install this driver software anyway
Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.
See details

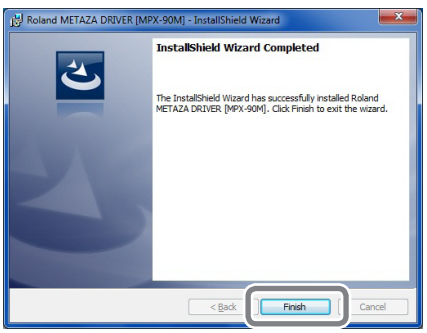
If the screen shown here is displayed, click [Install this driver software anyway].

Windows XP

Software Installation
The software you are installing has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the software vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

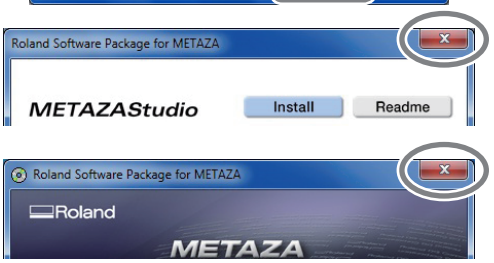
If the screen shown here is displayed, click [Continue Anyway].

❼


Roland METAZA DRIVER [MPX-90M] - InstallShield Wizard
InstallShield Wizard Completed
The InstallShield Wizard has successfully installed Roland METAZA DRIVER [MPX-90M]. Click Finish to exit the wizard.
< Back
Finish
Cancel

When the screen shown here is displayed, click [finish].

❽



Click **of the setup menu.**

❾ **Remove the CD-ROM from the CD-ROM drive.**

❿ **Connect the machine and the computer with a USB cable.**

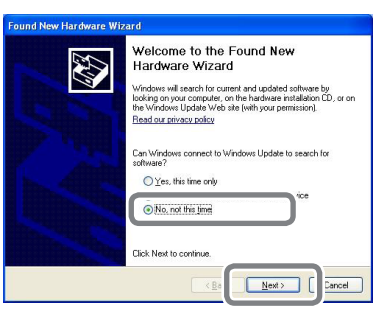
Please use the included USB cable. Do not use a USB hub.

Windows Vista or 7

The driver will be installed automatically.

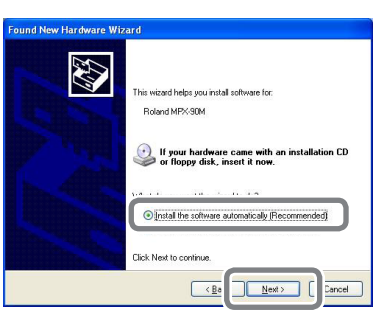
Windows XP

①


Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission).
Read our privacy policy
Can Windows connect to Windows Update to search for software?
Yes, this time only
No, not this time
Click Next to continue.
Next >
Cancel

Select [No, not this time] and click [Next].

②


Found New Hardware Wizard
This wizard helps you install software for:
Roland MPX-90M
If your hardware came with an installation CD or floppy disk, insert it now.
Install the software automatically (Recommended)
Click Next to continue.
Next >
Cancel

Select [Install the software automatically] and click [Next].

③

Found New Hardware Wizard
Completing the Found New Hardware Wizard
The wizard has finished installing the software for:
Roland MPX-90M
Click Finish to close the wizard.
Finish
Cancel

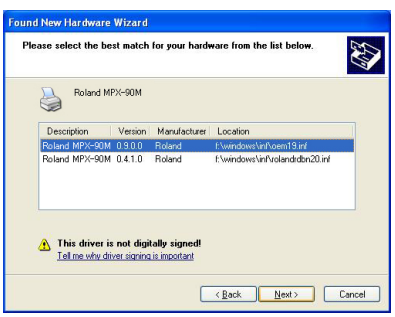
Click [Finish].

If the following screen is displayed during installation

Click [Continue Anyway].

Hardware Installation
The software you are installing for this hardware:
Printers
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

Eject and remove the CD-ROM, and then click [Back] and repeat from the last screen.



To Install Software Separately

You can install the driver and software at a time. For the method of installing them at a time, see P. 18, "Installing the Driver and the Software".

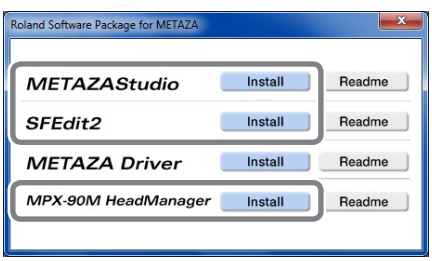
Procedure

1. **Log on to Windows as an administrator or as a member of the Administrators group.**

2. **Insert the Roland Software Package CD-ROM into the computer.**
   (Windows Vista/7 only: When the automatic playback window appears, click [Run menu.exe].)
   The setup menu appears automatically.

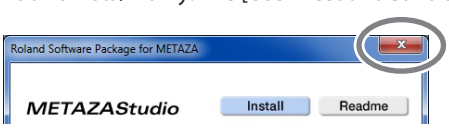
3.

   Click "Custom Install."

4. 

   Click [Install] of the program you want to install.
   ☞ P. 17, "The Software You Can Install and Set Up"
   For detailed information about installing METAZA driver, refer to page 72 "To install METAZA driver separately."

5. **Follow the messages to install the softwares.**
   (Windows Vista/7 only: The [User Account Control] appears, click [Allow], and install the softwares.)

6. 

   "When installation finishes, click of the setup menu."

7. **Remove the CD-ROM from the CD-ROM drive.**

The METAZA Driver Cannot Be Installed

If the driver installation stops partway through or if the wizard does not appear when you use a USB cable to connect the PC to the machine, follow the appropriate procedure shown below.

Windows 7

1. Use a USB cable to connect the machine and the PC, and then turn the machine on.
2. If the Found New Hardware wizard appears, click [Cancel] to close it. Disconnect any USB cables for printers other than this machine.
3. On the taskbar, click [Start], and then right-click [Computer]. Click [Properties].
4. Click [Device Manager]. When the User Account Control dialog box appears, click [Continue].
The Device Manager window appears.
5. Click [Show hidden devices] on the View menu.
6. Double-click [Printers] or [Other devices] in the list. Click the model name or [Unknown device], whichever appears below the item you selected.
7. Click [Delete] on the Action menu.
8. In the Confirm Device Uninstall dialog box, select the "Delete the driver software for this device." Check box, and then click [OK] to close the device manager.
9. Disconnect the USB cable that is connected to the printer, and then restart Windows.
10. Uninstall the METAZA driver.
See page 78, "Uninstalling the METAZA driver," and follow the procedure for Windows 7 from step 3 to uninstall the METAZA driver.
11. Follow the procedure on page 72, "To install METAZA driver separately" to install the driver again.

Windows Vista

1. Use a USB cable to connect the machine and the PC, and then turn the machine on.
2. If the Found New Hardware wizard appears, click [Cancel] to close it. Disconnect any USB cables for printers other than this machine.
3. On the taskbar, click [Start], and then right-click [Computer]. Click [Properties].
4. Click [Device Manager]. When the User Account Control dialog box appears, click [Continue].
The Device Manager window appears.
5. Click [Show hidden devices] on the View menu.
6. Double-click [Printers] or [Other devices] in the list. Click the model name or [Unknown device], whichever appears below the item you selected.
7. Click [Delete] on the Action menu.
8. In the Confirm Device Uninstall dialog box, select the "Delete the driver software for this device." check box, and then click [OK] to close the device manager.
9. Disconnect the USB cable that is connected to the printer, and then restart Windows.
10. Uninstall the METAZA driver.
See page 78, "Uninstalling the METAZA Driver," and follow the procedure for Windows Vista from step 3 to uninstall the METAZA driver.
11. Follow the procedure on page 72, "To install METAZA driver separately" to install the driver again.

Windows XP

1. Use a USB cable to connect the machine and the PC, and then turn the machine on.
2. If the Found New Hardware Wizard appears, click [Finish] to close it. Disconnect any USB cables for printers other than this machine.

3. On the taskbar, click [Start], and then right-click [My Computer]. Click [Properties].
4. Click the Hardware tab, and then click [Device Manager].
The Device Manager window appears.
5. Click [Show hidden devices] on the View menu.
6. Double-click [Printers] or [Other devices] in the list. Click the model name or [Unknown device], whichever appears below the item you selected.
7. Click [Delete] on the Action menu.
8. In the Confirm Device Uninstall dialog box, click [OK].
9. Close the Device Manager window, and click [OK].
10. Disconnect the USB cable that is connected to the printer, and then restart Windows.
11. Uninstall the METAZA driver.
See page 79, "Uninstalling the METAZA driver," and follow the procedure for Windows XP from step 3 to uninstall the METAZA driver.
12. Follow the procedure on page 72, "To install METAZA driver separately" to install the driver again.

Uninstalling the METAZA driver

Follow the appropriate procedure below to uninstall the driver.

Windows 7

1. Turn the machine off, and disconnect the USB cable that is connecting the PC and the machine.
2. Log on to Windows as an administrator.
3. On the task bar, click [Start], [METAZA Controller], and then [Uninstall a program].
4. Select the machine's driver that you want to uninstall, and then click [Uninstall].
5. When a message prompting you to confirm that you want to uninstall the driver appears, click [Yes].
6. On the task bar, click [Start], [All Programs], [Accessories], [Run], and then [Browse].
7. Choose the name of the drive or folder where the driver is located.*
8. Select "SETUP.EXE," click [Open], and then click [OK].
9. When the User Account Control dialog box appears, click [Allow].
The driver's installer starts.
10. Click [Uninstall]. Select the machine that you want to uninstall, and then click [Start].
11. When a dialog box prompting you to restart the PC appears, click [Yes].
When the computer restarts, the uninstallation is finished.

* When you are using the CD-ROM, specify one of the following folders. (The CD drive is drive D in this example.)
D:\Drivers\WIN7X64 (64-bit version)
D:\Drivers\WIN7X86 (32-bit version)
If you're not using the CD-ROM, go to the Roland DG Corp. website (http://www.rolanddg.com/), and download the driver for the machine you want to delete. Then, specify the folder where you extracted the downloaded file to.

Windows Vista

1. Turn the machine off, and disconnect the USB cable that is connecting the PC and the machine.
2. Log on to Windows as an administrator.
3. On the task bar, click [Start], [Control Panel], and then [Uninstall a program].
4. Select the machine's driver that you want to uninstall, and then click [Uninstall].
5. When a message prompting you to confirm that you want to uninstall the driver appears, click [Yes].

6. On the task bar, click [Start], [All Programs], [Accessories], [Run], and then [Browse].
7. Choose the name of the drive or folder where the driver is located.*
8. Select "SETUP.EXE," click [Open], and then click [OK].
9. When the User Account Control dialog box appears, click [Allow].
The driver's setup program starts.
10. Click [Uninstall]. Select the machine that you want to uninstall, and then click [Start].
11. When a dialog box prompting you to restart the PC appears, click [Yes].
When the computer restarts, the uninstallation is finished.

* When you are using the CD-ROM, specify one of the following folders. (The CD drive is drive D in this example.)
D:\Drivers\WINVISTAX64 (64-bit version)
D:\Drivers\WINVISTAX86 (32-bit version)
If you're not using the CD-ROM, go to the Roland DG Corp. website (http://www.rolanddg.com/), and download the driver for the machine you want to delete. Then, specify the folder where you extracted the downloaded file to.

Windows XP

1. Turn the machine off, and disconnect the USB cable that is connecting the PC and the machine.
2. Log on to Windows as an administrator or as a member of the Administrators group.
3. On the task bar, click [Start], [Control Panel], and then [Uninstall a program].
4. Select the machine's driver that you want to uninstall, and then click [Uninstall].
5. When a message prompting you to confirm that you want to uninstall the driver appears, click [Yes].
6. On the task bar, click [Start], [All Programs], [Accessories], [Run], and then [Browse].
7. Choose the name of the drive or folder where the driver is located.*
8. Select "SETUP.EXE," click [Open], and then click [OK].
The driver's setup program starts.
9. Click [Uninstall]. Select the machine that you want to uninstall, and then click [Start].
10. When a dialog box prompting you to restart the PC appears, click [Yes].
When the computer restarts, the uninstallation is finished.

* When you are using the CD-ROM, specify one of the following folders. (The CD drive is drive D in this example.)
D:\Drivers\WINXPX64 (64-bit version)
D:\Drivers\WINXPX86 (32-bit version)
If you're not using the CD-ROM, go to the Roland DG Corp. website (http://www.rolanddg.com/), and download the driver for the machine you want to delete. Then, specify the folder where you extracted the downloaded file to.

4-3 When Moving the Machine

Attaching retainers

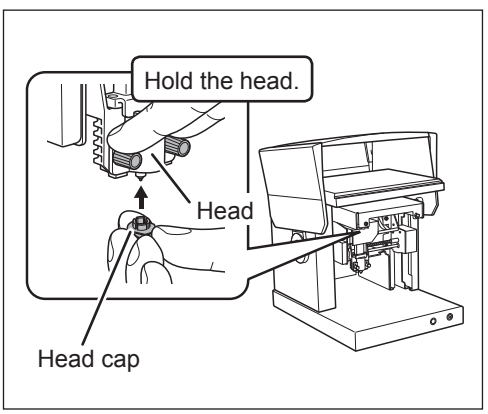
When moving the machine, be sure to attach the retaining materials. Moving the machine without attaching the retaining materials may result in damage to the machine.

Procedure

❶ **Switching on the power.**

☞ P. 27, "STEP 1: Switching On the Power"

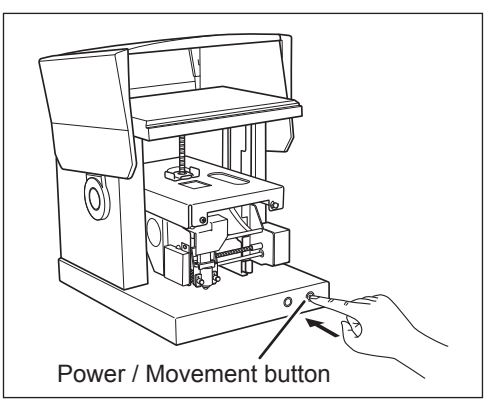
❷ **Remove the vise (or the table).**

❸ 

Attach the head cap.

❹ **Switching off the power.**

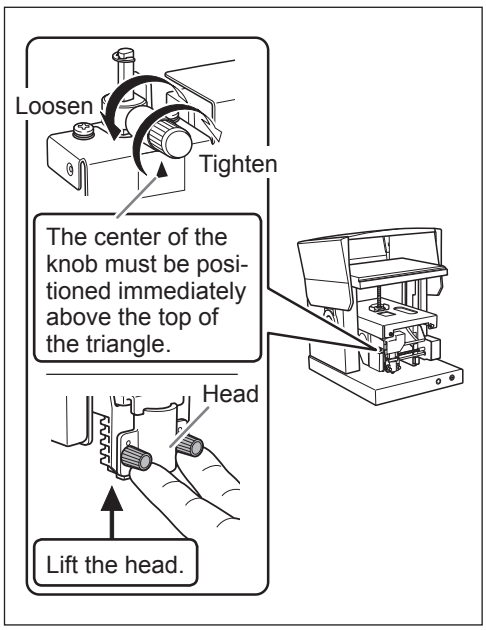
☞ P. 45, "STEP3: Finishing Printing (Switching Off the Power)"

❺ 

Hold down the Power/Movement button for ten seconds or longer.

The head moves as shown in the figure.

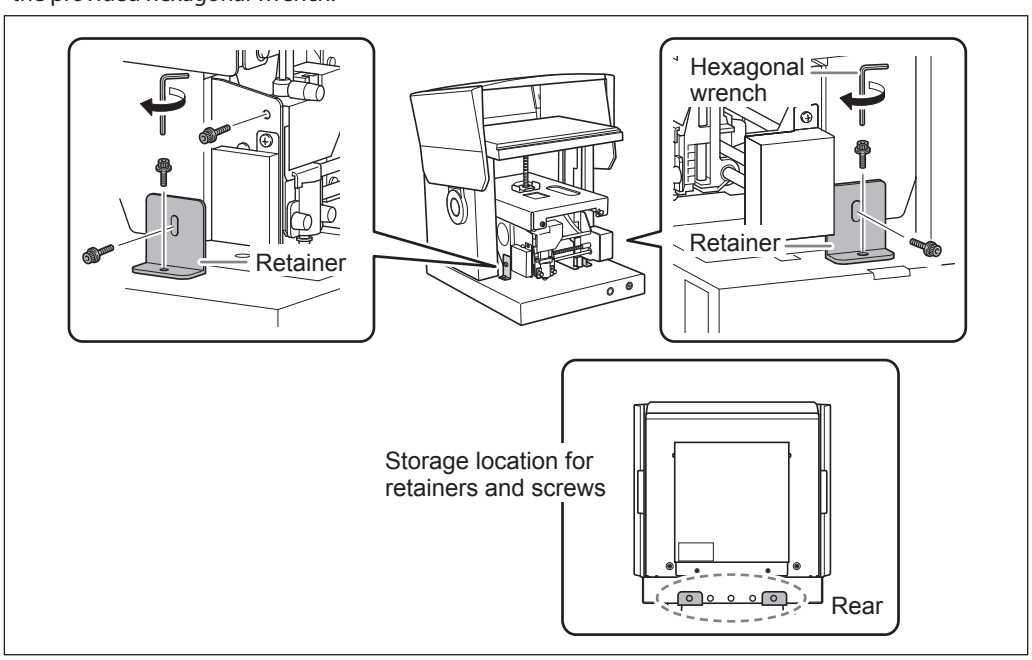
❻



Fix the head at the highest position.
After loosening the knob, lift the head to the highest position and tighten the knob.

❼ **Remove the power cord and USB cable.**

❽ **Attach the retaining materials.**
Secure the machine at three points (with 5 screws). Attach all the retainers and wind up the screws with the provided hexagonal wrench.

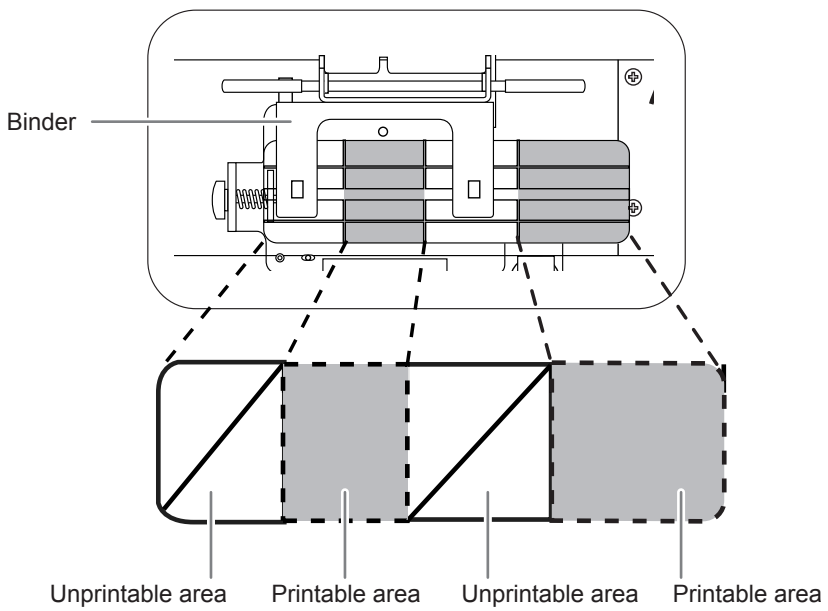


❾ **Close the cover and repack the machine in the original package.**
When moving the machine, be sure to support it at the bottom using two hands. Attempting to move the machine by holding it at a different location may result in damage.

4-4 Main Unit Specifications

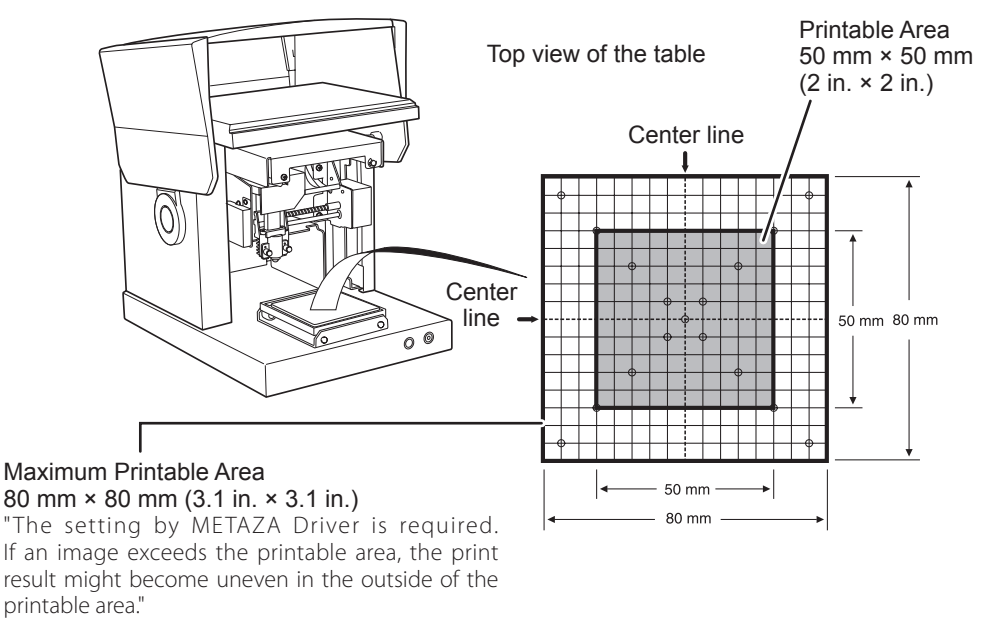
Printable Area

Vise

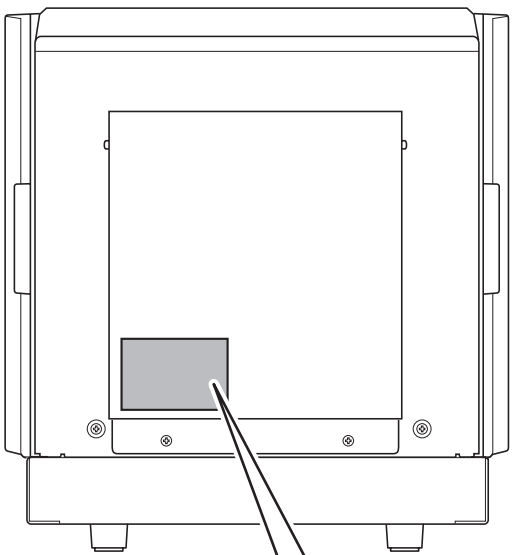


* The 10 mm area from the binder of the vice is unprintable because the head comes into contact with the binder.

Table

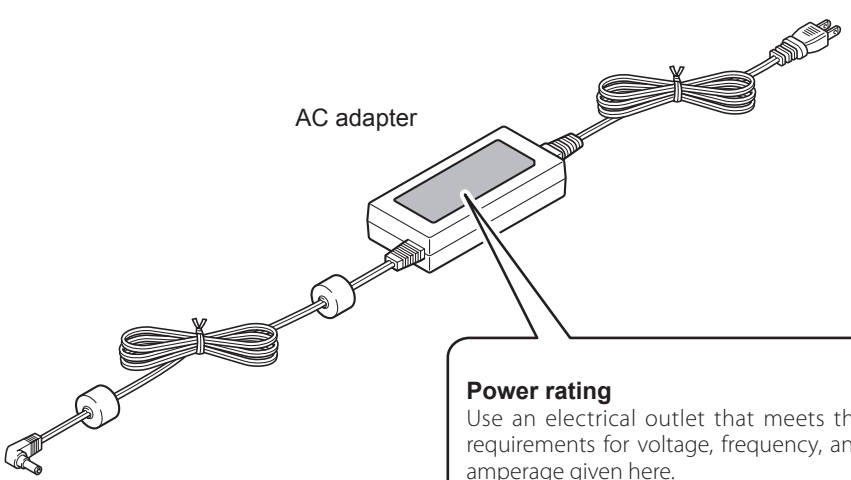

Top view of the table
Printable Area
50 mm × 50 mm
(2 in. × 2 in.)
Center line
Center line
50 mm
80 mm
50 mm
80 mm
Maximum Printable Area
80 mm × 80 mm (3.1 in. × 3.1 in.)
"The setting by METAZA Driver is required. If an image exceeds the printable area, the print result might become uneven in the outside of the printable area."

Location of Power Rating and Serial Number Label



Serial number
This is required when you seek maintenance or support. Never remove the label.

Power rating
Use an electrical outlet that meets the requirements for voltage, frequency, and amperage given here.



Power rating
Use an electrical outlet that meets the requirements for voltage, frequency, and amperage given here.

Specifications

	MPX-90M	
Printable material	Gold, silver, copper, platinum, brass, aluminium, iron, stainless steel, etc. (Vickers hardness [HV] of the printing surface must be 200 or less.)	
Loadable material size	Maximum 100 mm (width) x 200 mm (length) x 40 mm (thickness), or 200 mm (width) x 100 mm (length) x 40 mm (thickness) (3.9 in. x 7.9 in. x 1.5 in.), or (7.9 in. x 3.9 in. x 1.5 in.) (The maximum of the thickness is "20 mm (0.8 in.)" at the time of vice-use.)	
Printing area	80 mm x 80 mm (3.1 in. x 3.1 in.)	
Resolution	529 dpi (High resolution), 353 dpi (Photo), 265 dpi (Text), 1058 dpi (Vector)	
Printing direction	Unidirectional printing or bidirectional printing (Selectable with Windows driver)	
Printing speed (Default)	50 mm/sec (1.9 in./sec) (Photo), 33 mm/sec (1.2 in./sec) (High resolution/Text), 24 mm/sec (0.94 in./sec) (Vector)	
Interface	USB interface (compliant with Universal Serial Bus Specification Revision 1.1)	
Power requirements	Dedicated AC adapter	AC 100 V to 240V ± 10 % 50 / 60 Hz
	Machine	DC 19 V 1.6 A
Power consumption	Approx. 24W	
Acoustic noise level	Under 70 dB (A)	
Operation temperature	10 to 30°C (50 to 86°F)	
Operation humidity	35 to 80% (no condensation)	
External dimensions	286 mm (W) x 383 mm (D) x 308 mm (H) (11.3 in. (W) x 15.1 in. (D) x 12.2 in. (H))	
Weight	11 kg (24.2 lb.)	
Accessories	AC adapter, power cord, test-use printing material, vise, USB cable, Roland Software Pacakge CD-ROM, user's manual, etc.	

System Requirements for USB Connection

Computer	A model preinstalled with the 32- or 64-bit edition of Windows XP, Windows Vista, or Windows 7, or a model upgraded from the one preinstalled with Windows XP or any later operation system than Windows XP
USB cable	Use the included USB cable.

Roland

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